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The OIL AND GAS JOURNAL

JULY 9
1936

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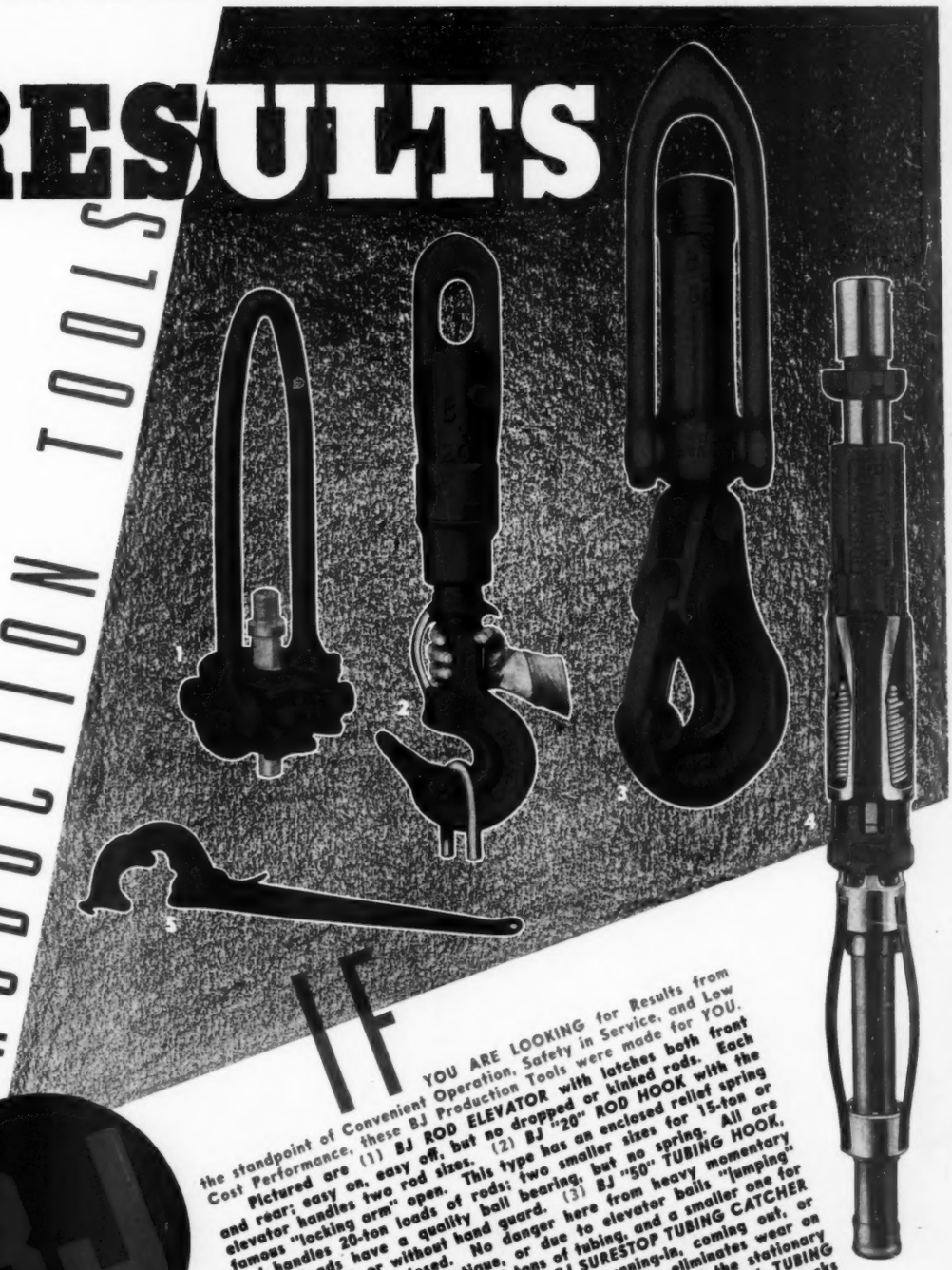
RESULTS

PRODUCTION TOOLS



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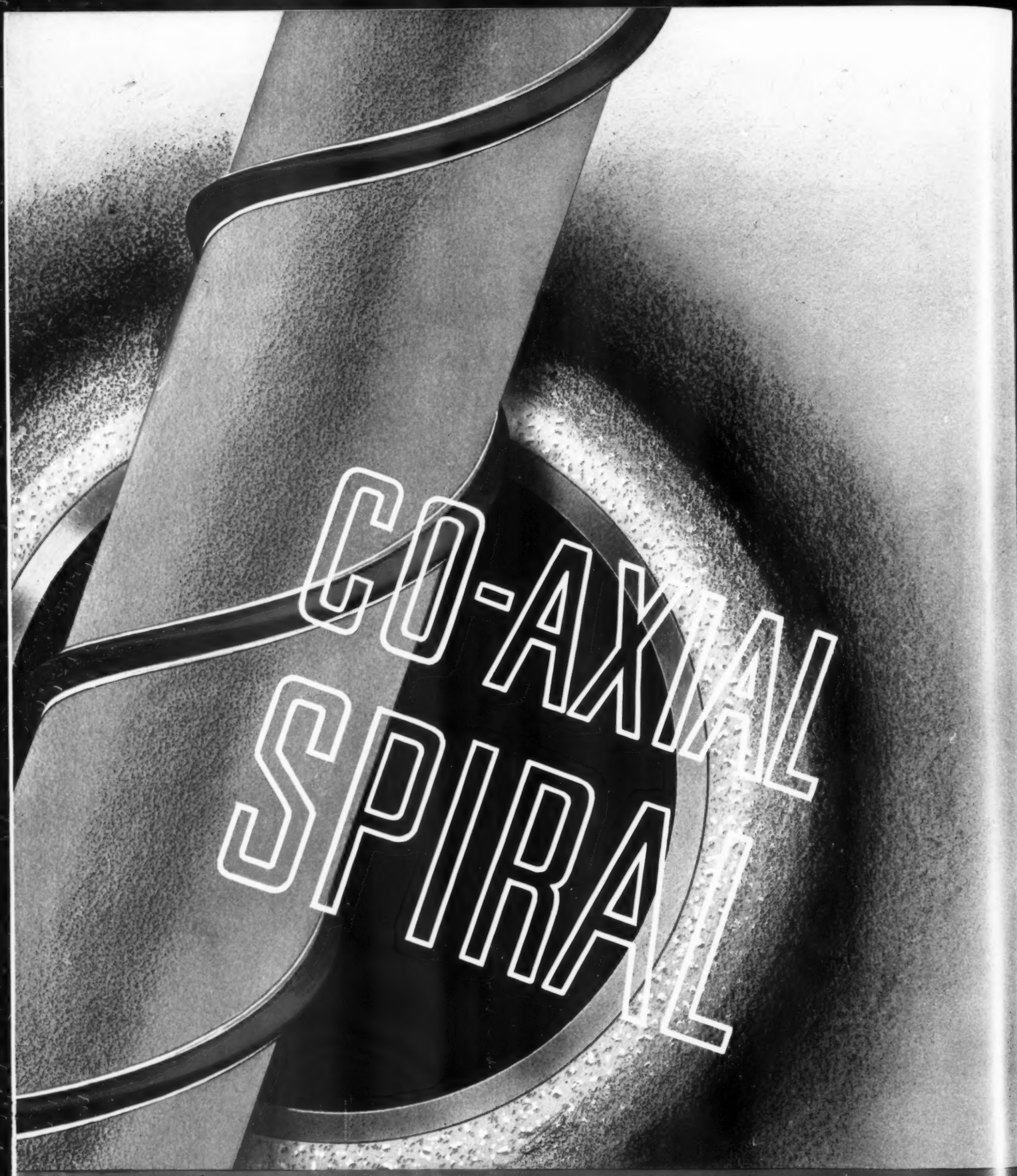

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Closer Balance Brightens Oil Prospect

DECREASE of 76,688 barrels in the daily average production of crude, along with mounting consumption of gasoline, provided spots of particular interest in the week's developments. Oklahoma led in the movement toward a better balance between the supply of crude and the demand for it. With a daily average output of 508,650 barrels, it was not only 61,150 barrels below the figure recommended by the U. S. Bureau of Mines, but 17,525 barrels below the allowable fixed by the State Corporation Commission. The Oklahoma City field, in which the curtailment problem centers, produced 31,175 barrels less daily than it did the week before. Texas also did much better, its total daily average dropping 32,000 barrels below that of the preceding week. It was 8,450 barrels under the Bureau of Mines recommended figure, but 10,000 barrels above the allowable set by the State Railroad Commission. Observers expressed the opinion that Texas probably would improve its showing in the coming week.

Reports from throughout the country indicate that the highest expectations concerning gasoline consumption over the Independence Day holiday were fulfilled. Instead of the brief period of slackened demand normally looked for immediately after the Fourth of July, evidence points to a virtually uninterrupted rise in the consumption of motor fuel. So deeply did motorists draw on retail supplies that dealers and jobbers were reported this week to be sending rush orders to replenish their exhausted stocks.

Concern is evinced over a situation in Oklahoma interpreted as a threat to the proration system in that state. Two developments give rise to this feeling. One is the filing of a suit designed to increase the allowable production in the Oklahoma City field. The other is a move which contemplates equalization of recovery of old and new wells, and Governor Marland is said to have initiated it. Although for the time being the situation is a local one, it easily could affect the oil industry in the entire Southwest and even nationally. If restrictions on production, which in the last decade have reduced waste, stabilized prices and increased ultimate recovery from sands, were to be removed or seriously interfered with in Oklahoma, it is safe to say other states would abandon orderly production practices too, with resulting return to competitive drilling and floods of unneeded oil.

Production 2,892,040
Decrease 76,688

Following discovery of oil in the Stevens district of Kern County, California, a leasing campaign has tied up 50,000 more acres in that state. Northern counties are being explored for gas structures. Eight hundred acres was added to proven territory in the Lance Creek field, Wyoming, through a wildcat of the Continental Oil Company showing oil in the Sundance sand.

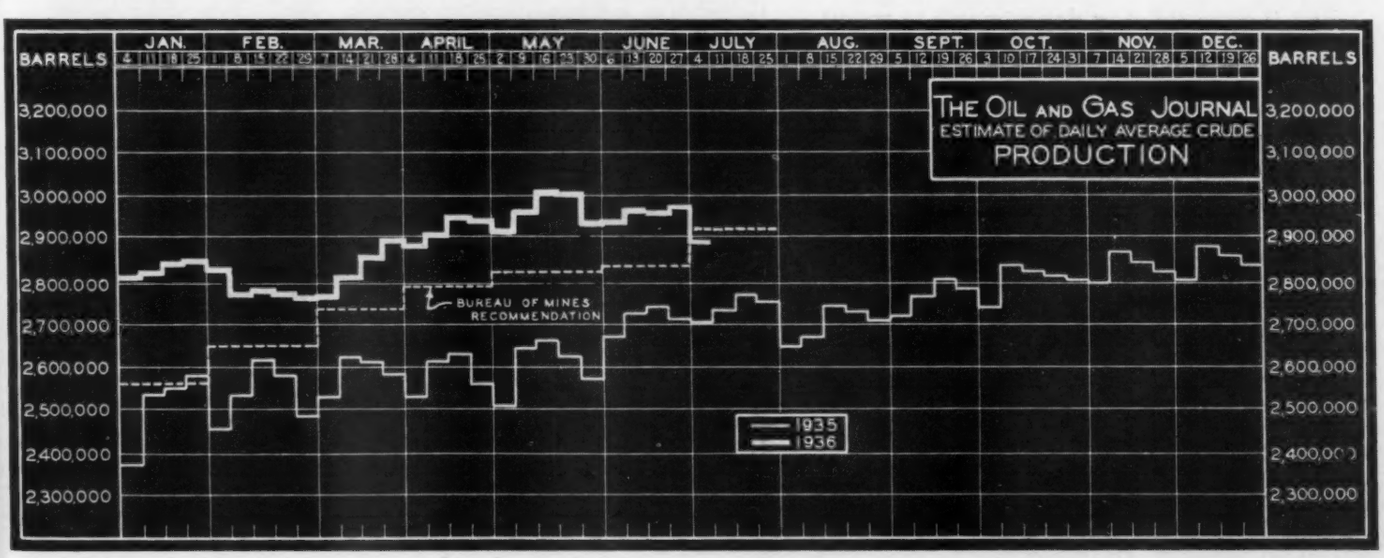
Daily Average Production for Week

	July 4, 1936	Bur. Mines est. for for July	State allowables July	June 27, 1936
Oklahoma City	106,600	.....	.....	137,775
Seminole-St. Louis	100,200	.....	.....	103,440
Remainder of State	301,850	.....	.....	314,110
Total Oklahoma	508,650	569,800	526,175	555,325
East Texas	429,350	.....	.....	445,097
West Texas	181,381	.....	.....	180,944
Texas Panhandle	61,239	.....	.....	65,257
North Central Texas	84,385	.....	.....	84,287
East Central Texas	52,543	.....	.....	53,639
Gulf Coast—Texas	246,039	.....	.....	254,587
Southwest Texas	83,105	.....	.....	86,248
Total Texas	1,138,042	1,146,500	1,127,850	1,170,059
North Louisiana	77,760	.....	.....	76,325
Gulf Coast—Louisiana	145,987	.....	.....	146,398
Total Louisiana	223,747	186,800	224,900	222,723
Santa Fe Springs	43,100	.....	.....	43,450
Long Beach	66,700	.....	.....	67,250
Kettleman Hills	77,850	.....	.....	77,400
Remainder of State	380,950	.....	.....	382,700
Total California	568,600	550,800	.....	570,800
Kansas	144,750	164,200	151,629	146,000
Arkansas	30,025	31,300	.....	29,660
Eastern Fields	110,000	107,700	.....	110,000
Michigan	38,936	33,800	.....	36,831
Southeastern New Mexico	70,170	68,400	71,250	70,080
Rocky Mountain area	59,120	57,900	.....	57,250
Total United States	2,892,040	2,917,200	.....	2,968,728

Crude Oil Stocks in United States

(BUREAU OF MINES ESTIMATES)

Week ending June 20, 1936	312,344,000
Week ending June 13, 1936	312,543,000
Week ending June 22, 1935	335,780,000



SPARKS FROM THE NEWS

Lion and Lamb

Nineteen pipeline companies file protest with Interstate Commerce Commission against recommendation that rates be cut 35 per cent. Watch the railroads join that protest!

R. S. V. P.

At July 16 proration hearing Texas Railroad Commission promises regulatory action for Cass County Rodessa field. Louisiana officials invited to be present. Silence reigns.

Miles vs. Mileage

Car manufacturers stress low gasoline consumption on a mileage basis. They make them so comfortable the owner drives more miles with no resulting loss to the oil industry.

Safety

Warning to oil and automobile industries. British government official refuses to approve highway construction program because "more roads, more deaths."

Sales Practice

Reports indicate sales departments already selling 100-octane gasoline for less than it costs refining departments to manufacture it.

Benefits

One cent reduction in New York gasoline tax to save motorists $15,000,000 yearly. No better way of spreading benefits to the maximum number.

Dividends

Estimated oil company earnings first 6 months, 25 to 50 per cent greater. This fact, with new Federal tax on undivided profits, points to increased dividends.

Disguised Blessing

With chain-store taxes in twenty-three states, Iowa plan of leasing filling stations is spreading. Sighs of relief are heard from unexpected quarters.

Radiant

Outlook for natural gas industry excellent. New Eastern markets will accelerate already rising volume. Its great advantage as fuel cannot be denied.

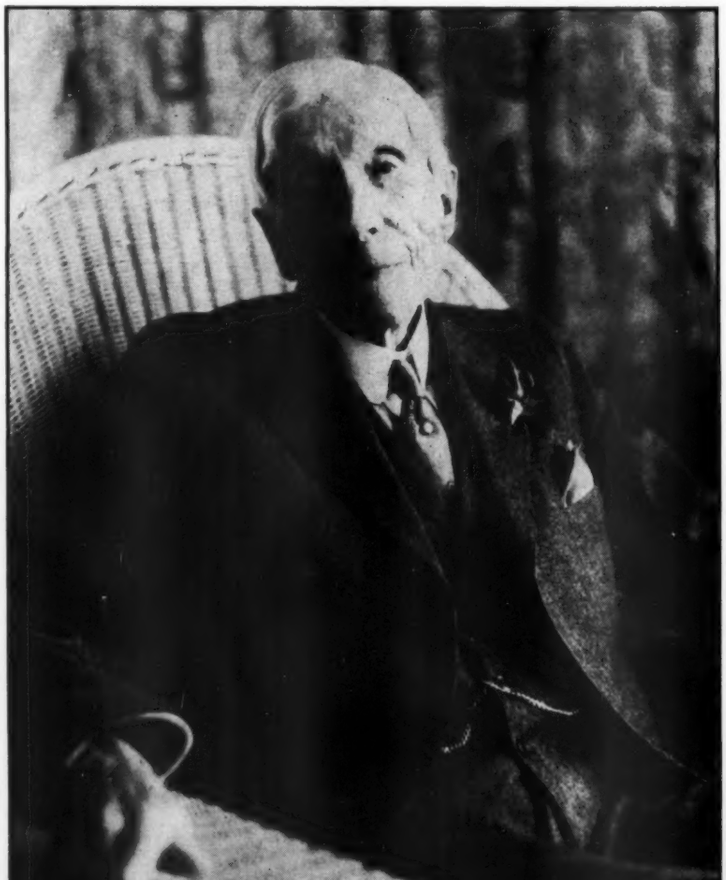
Limelight

Kansas drilling operations maintain fast pace while Rodessa and Oklahoma City subside. That state insists upon page one performance.

Colic

Rodessa becomes one year old July 12. The anniversary finds 235 wells averaging 62,060 barrels. Her first year cost the industry much sleep.

NINETY-SEVEN YEARS OLD THIS WEEK



Int. News Photo

Night scene at the Port Jerome, France, refinery of Standard Franco-Americaine de Raffinage S.A. View shows light-oil treating plant

American Controlled Operations in Foreign Lands Becoming Normal

By H. STANLEY NORMAN

NEW YORK, July 6.—With the exception of Mexico, where the oil industry is still jockeying for position with so-called workers' unions, foreign operations of American controlled companies have returned to normalcy. There remained two threats to continued labor stability, one in France and the other in Venezuela.

American companies, operating through subsidiaries in foreign lands, admittedly "had their fingers crossed" and were not too certain that tranquility would continue in France and Venezuela, where labor riots prompted for political reasons, had, until last week, seriously disturbed production and refining. Resignation of the Venezuelan cabinet under President Lopez Contrares has oil executives charged with carrying on operations in that country, wondering what will be the next move.

Sufficient labor legislation has been enacted in France to return refinery workers to their posts. The French legislature has passed bills limiting hours of work to 40 per week with paid vacations. There remain to be settled the workers' demands that wage scales be increased and that they be permitted to organize and bargain collectively.

Early settlement of disputes in Mexico between the Huasteca Petroleum Co., promised two weeks ago, has failed to materialize and while negotiations between company representatives, the strike leaders and government agents are continuing they seem to have reached a temporary deadlock. While only one field of Huasteca Petroleum Co.'s operations are affected by the Mexican labor strike, it is significant that under laws of the country any concession obtained by the comparatively small group can be demanded automatically by all other laborers. It is due to the universal application of settlement provisions that both sides in the dispute are proceeding with caution.

A flat demand from the Mexican labor factions' leaders that lower-bracket wages be increased 12½ per cent and upper-bracket 25 per cent was rejected by Huasteca representatives when no agreement could be reached on uniform classification of workers. Under present conditions Huasteca has the highest wage scale for peon labor in Mexico, but in some instances it is below the Aguila (Royal Dutch-Shell) in the higher brackets, partly due to different systems of classifying workers.

To meet the flat raise of 12½ per cent demanded for the lower-bracket laborers employed by Huasteca would bring this particular class of work at a premium over the Aguila standards and those of other producers in Mexico. Furthermore, the 25 per cent increase for higher-bracket laborers would produce the same results. Huasteca and other companies producing oil in Mexico are unwilling to be caught between a cross-fire of labor demands. Part of the present difficulty in Mexico was caused by first one company and then another meeting demands of labor organizations with each concession followed by greater representations from the workers' unions. The process has been so remote from permanent settlement that companies are about to reach the decision that one concession is the signal for multiple demands. Mexican labor leaders flatly refused to participate in a commission formed from their ranks, from the Aguila and Huasteca companies and from the government's labor board to reclassify oil workers from top to bottom. Oil companies advanced the proposal as a possible solution to re-occurrent strikes affecting first one and then another company's properties. The objective of the commission proposal was to establish uniform classifications for oil workers throughout Mexico and for the first time in the country's petroleum history arrive at a common meeting ground on wages and working conditions.

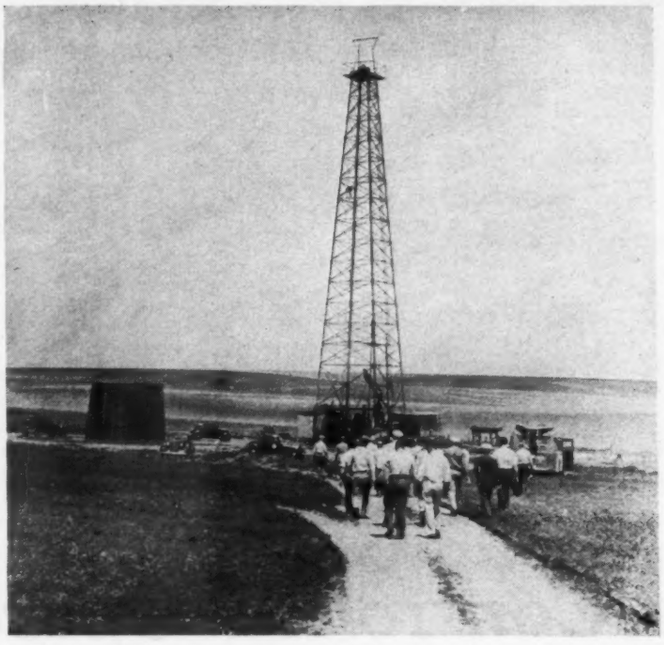
Under tentative settlement so far as negotiations have proceeded one company alone in Mexico faces immediate expenditure of approximately $750,000 for housing facilities. In many instances, companies probably will be forced to erect houses for employes who own their own homes in the vicinity of their work and who would not occupy the company built dwellings under any consideration. Furthermore, the wage demands now being made will require the outlay of nearly $1,000,000 additional annually. Excessive taxes in Mexico make the business of producing oil in that country an expensive problem at best, company representatives assert, and each additional item represents a real burden on the producers.

Officials of Major Oil Company Find Annual Inspection Trip Beneficial

By L. G. E. BIGNELL

The Continental Oil Co. officials have just completed their eighth annual inspection of company properties. Over a period of eight years these inspection trips have produced specific results that should be of interest to the industry as a whole. The appearance and condition of properties and the maintenance of equipment attest the efficacy of company officials leaving their offices and reviewing on the ground the many problems of local production, refining and sales representatives, which seem never to reach those who decide upon company policies. Within full view of all the circumstances that cannot be revealed by correspondence, local men are relieved of discouragements and are given solutions to their difficulties that cannot be reached except at close range.

The 1936 inspection tour of the Continental officials involved something in excess of 7,500 miles (including side trips to various properties) for the period May 25 to June 17, inclusive. This trip, like all others, was planned months in advance, with an itinerary selected that would give the greatest number of employe contacts for the periods allotted to the work of inspection.



Continental Oil Company No. 2 Briggs, C NE SW section 13-6n-61, Greasewood pool, Weld County, Colorado, rigging up

Regardless of position, every man has an opportunity to say his piece. In a majority of instances, decisions are made on all points at issue, except those which might involve sizeable expenditures. All policies and the reasons for them are openly and freely discussed so that no one is left in the dark as to the company's objectives.

The spring of the year is chosen because it offers the least interruption from the standpoint of weather and it is a time when all of the properties are, invariably, accessible. This must be given consideration because of the wide expanse of the company's operations from coast to coast and into Canada.

Col. T. D. Harris, in charge of motor transportation, organizes and directs these inspection tours and not only secures proper equipment but sees that every member of the party is properly housed each night and meals provided, which often tax the capacity of the numerous small hotels that must naturally be patronized. Nothing is done to detract in the least from permitting Continental officials to give undivided attention to operations, their comfort and accomodations being totally in the hands of Colonel Harris.

From 7 o'clock in the morning until 7:30 or 8 o'clock in the evening, the bus is on its way and round table meetings are held in a specifically equipped compartment, where every phase of the operations receives attention by experts and officials. A loud speaker system is installed in the bus so that announcements can be made and some semblance of order can be continually maintained to expedite the work of inspection and the methods of thoroughly doing it.

These inspection tours have had the facility of bringing about a cooperative spirit in the ranks of the company that can be secured only by a common acquaintance. Airing of all problems of the various departments causes the individual, who thinks his particular department has been slighted, to realize that everyone in the company has his troubles and, when once openly discussed, dwindle into insignificance. At no time is the party out of touch with the general office. Nothing is permitted to remain in status quo because of an absent officer.

At strategic points, the company's airplanes deliver mail and those who become members of the group for the territory which they supervise. It must be understood that only 12 of an average number of 34 or 35 per day complete the entire trip. As new territories are encountered, a new group entrains.

For this trip a 34-passenger modern bus was used, a new one being secured from the factory each year and sold at the end of the tour, with allowance made for the actual mileage traveled. The only change made in the bus is the seating arrangement in the rear, where a long table is installed opposite the end bench seat and the four rear individual seats are turned around to face the table.

Around this table men come and go, and conferences are held every minute of the day as the bus moves from point to point. These conferences are for the benfit of every department because the active head of each department is on the bus with Mr. Moran, and as each district is passed through the local men are picked up and join the party, take part in the conference and then return to their field or station.

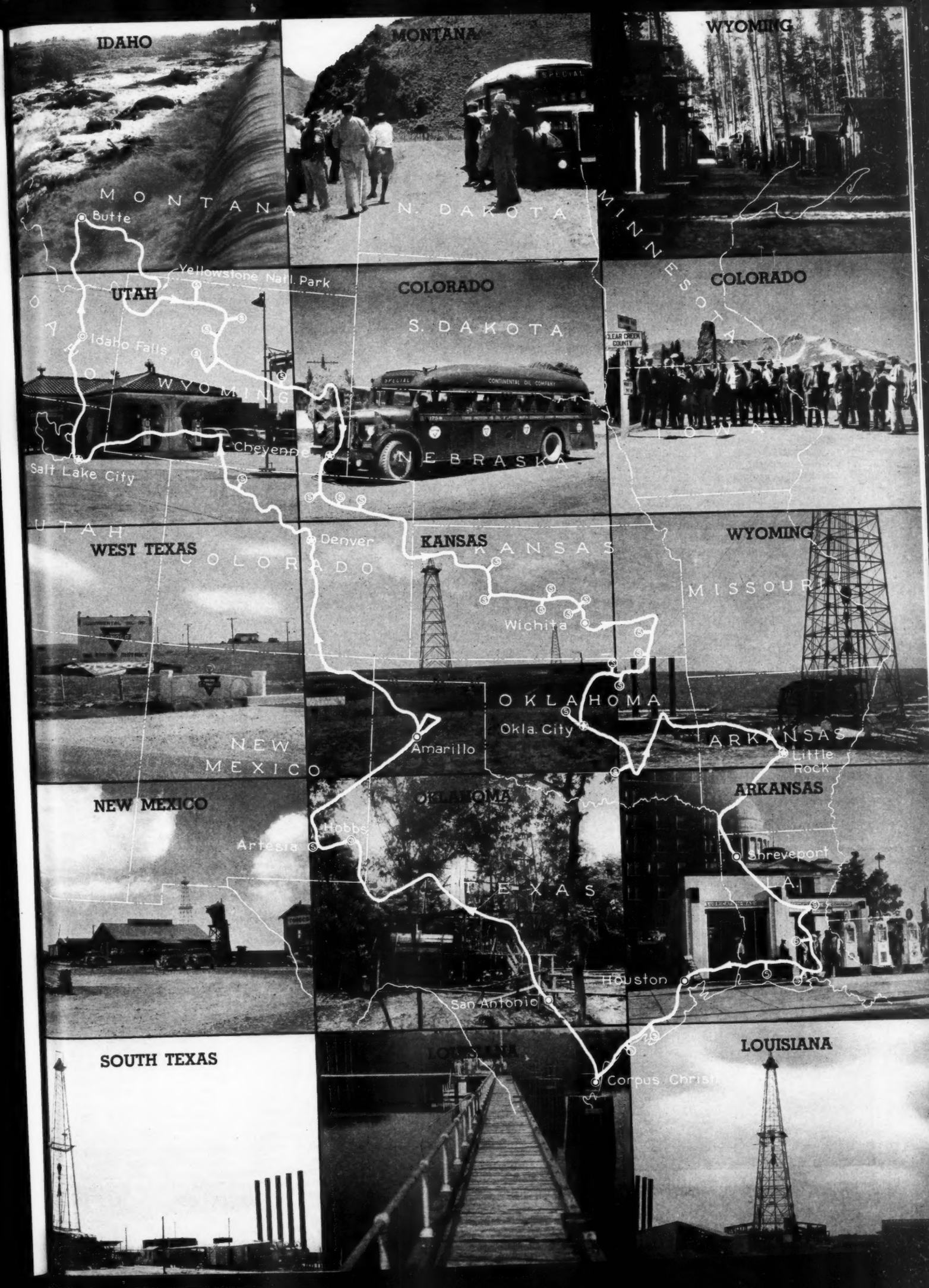
On this trip men from the general office who made all or part of the journey were President Dan Moran; W. W. Bruce, executive vice president; Harry J. Kennedy, vice president, marketing; Walter Miller, vice president, manufacturing; George D. Olds, Jr., assistant to president; J. J. Cosgrove, general counsel; T. D. Harris, superintendent motor transportation; J. G. Dyer, superintendent, production and drilling; H. K. V. Tompkins, manager, lands and exploration; W. I. Nunn, advertising manager; P. J. Ryan, manager sales operations; F. L. Hanks, assistant general sales manager; W. H. O'Connor, purchasing agent; G. T. Bodman, general auditor; G. C. Clark, chief geologist; L. F. Athy, chief geophysicist; and Joe Dawson of the company's advertising agency. In addition, C. E. Fehrenbach, official photographer; P. J. Dominic, secretary; Ray McVay, driver, and Cecil Hewitt, mechanic, made the trip. Incidentally, this is the eighth complete trip covered by Mr. McVay who has driven the bus each year since the inspection trips started and has done so without having a road accident of any kind.

The itinerary of the inspection tour this year, starting from Ponca City on May 26, was as follows:

May 26	McAlester, Okla.	329
May 27	Hot Springs, Ark.	332
May 28	Alexandria, La.	332
May 29	Beaumont, Tex.	265
May 30	Corpus Christi, Tex.	304
May 31	Big Spring, Tex.	384
June 4	Artesia, N. Mex.	306
June 5	Amarillo, Tex.	300
June 6	Raton, N. Mex.	375
June 7	Denver, Colo.	210
June 8	Rock Springs, Wyo.	377
June 9	Pocatello, Idaho	401
June 10	Butte, Mont.	267
June 11	Yellowstone Park, Wyo.	250
June 12	Thermopolis, Wyo.	469
June 13	Casper, Wyo.	225
June 14	Cheyenne, Wyo.	240
June 15	Goodland, Kans.	329
June 16	McPherson, Kans.	326
June 17	Ponca City, Okla.	359
	Total mileage	6,333

Titles of Pictures

IDAHO—Idaho Falls.
MONTANA—Road near Dillon.
WYOMING—Yellowstone Park.
UTAH—Ogden filling station.
COLORADO—Bus in Berthoud Pass.
COLORADO—Continental Oil Co. party.
WEST TEXAS—Lease at Big Spring.
KANSAS—Well near Wakeeney.
WYOMING—Lance Creek field.
NEW MEXICO—Hobbs Camp.
OKLAHOMA—Jesse field well.
ARKANSAS—Little Rock.
SOUTH TEXAS—Moore well, Calhoun County.
LOUISIANA—Water terminal, Lake Charles.
LOUISIANA—Abbeville test, 10,005 feet deep.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Group of Independent Oil Men Owns and Controls the Jeanerette Field

By NEIL WILLIAMS

Unusual in the development of Louisiana Gulf Coast fields, with their generally costly exploration and drilling conditions and deep sands which lend themselves to large company operations, a little group of independents is having things its own way in the Jeanerette field, St. Mary's Parish, down in the Bayou Teche country.

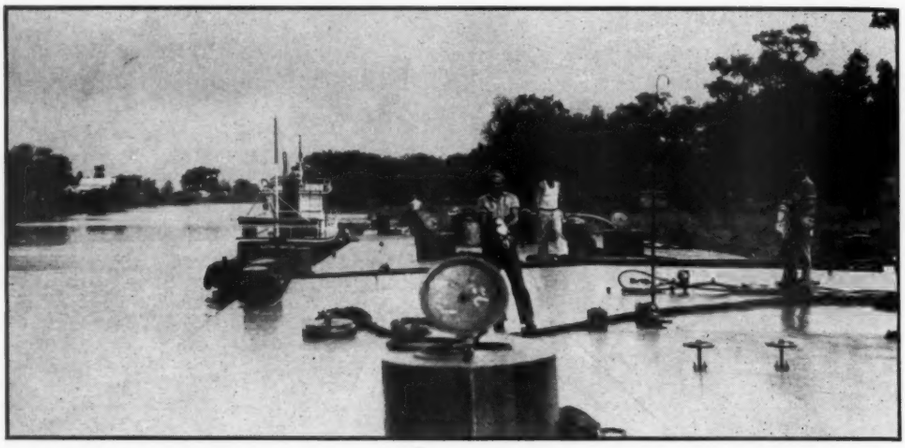
This group, composed of W. C. Hertel, J. C. McKallip, J. Perry Scranton, George Hamman, H. S. Reavis, Sam H. Davis and Harry C. Hanszen, all of Houston, Tex., owns and controls the entire field in the center of a practically solid 16,500-acre block. Not a large company has any acreage or other interest in the field or area. What is more, members of the group own a substantial portion of the fee royalty.

Organized since development has got under way as the Herton Oil Co., this group went into the area alone, blocked the acreage and drilled the discovery well without any large companies having opportunity to get a look-in. Also, instead of disposing of its holdings to some major company, the group is carrying on its own systematic development program.

What is of more significance, a field of first importance is being proved. Six months old, the field has had seven producing wells drilled in succession without a failure. Only lately has the chain been broken with a deep test, located on the extreme northwest end, having missed production. Otherwise the producing area has no definition. It now covers a radius of a half mile with operators steadily and cautiously feeling their way outward.

The field has been characterized by wells of consistent production and pressures, with the daily output gradually built up to a substantial volume. Under the July proration schedule issued by the Department of Conservation, the daily allowable is 3,000 bbls., an increase of 1,000 bbls. over the June allowable. Three sands, one at 6,600 feet, another at 7,000 feet, and the third at 7,400 feet, have been proved so far. All are in the Miocene, the potentially prolific Oligocene sand remaining to be exploited.

However, two tests drilled below present producing levels have been unsuccessful. One on the extreme northwest was drilled to 9,000 feet, where it now is standing. The other, on the extreme east, went to 9,600 feet, but was plugged back and completed in the 7,000-foot sand.



Loading an oil barge in the Bayou Teche. The oil is barged to Beaumont, Tex.

From the beginning these operators have chosen to develop and produce the field in orderly and conservative fashion. A drilling program of one well to 20 acres is being followed. Three rigs have been kept running. All wells have been drilled by Ben (Bud) Coyle, Houston drilling contractor, who now is devoting a large part of his attention to this one field.

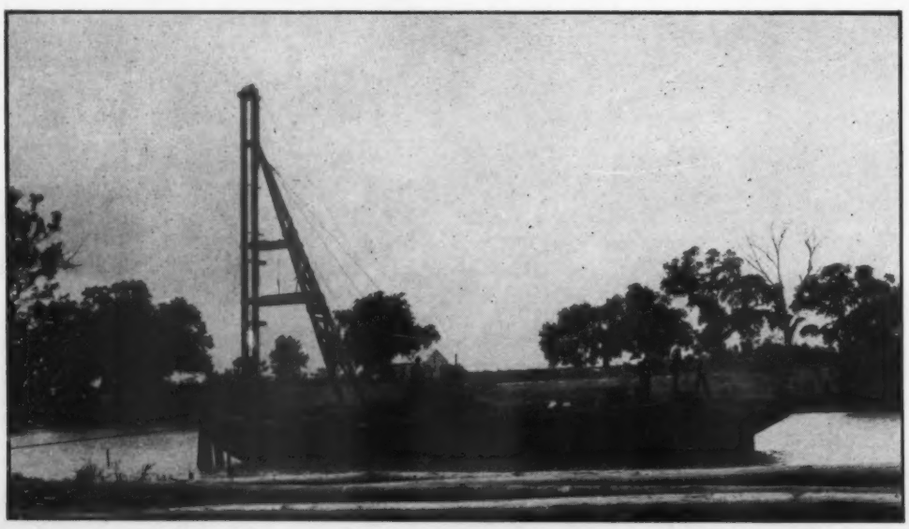
The set-up of the field is about as ideal as any operator in coastal Louisiana could expect. Located on the banks of Bayou Teche, the field has the advantages of a natural water route outlet for its production to any of the big refining centers on the Gulf Coast. Oil is loaded on barges right at the field for movement down the Teche to the Intercoastal Canal, which extends from the Mississippi River westward across southern Louisiana and coastal Texas.

A short distance off the Houston-New Orleans concrete highway and the Southern Pacific Railroad, the field is readily accessible. It is in the heart of the rich sugar-cane district of south central Louisiana, and with the field on high and dry land, a rare condition in southeastern Louisiana, operations have been greatly facilitated.

Although just a few miles southeast of the New Iberia field of Iberia Parish, and not a great distance from other fields of southern Louisiana, Jeanerette is the first production of St. Marys Parish. Attention was attracted to the area first in 1933 by Mr. Hertel, one of the group of independents, who had observed gas showings in two abandoned water wells in the area and who had noted the presence of paraffin dirt beds. He interested the others, and the area then was blocked under the direction of Mr. Scranton. It was in recognition of the work of Mr. Hertel and Mr. Scranton that the company was named "Herton," the first three letters being from Mr. Hertel's name and the last three from Mr. Scranton's. Mr. McKallip is president of the company. Mr. Hamman, Mr. Hanszen and Mr. Scranton are vice presidents, and Mr. Davis is secretary and treasurer. All members of the company have been active oil men on the Gulf Coast for many years.

Assembling of the block was completed in April, 1934, after which the structure was outlined under contract by the Petty Geophysical Engineering Co., of San Antonio, Tex. The first test, No. 1 Roane, in Lot 13, section 38-13s-9e, was started in October, 1935, and completed late in December at a depth of 7,498 feet, after plugging back from a total depth of 7,512 feet, where it swabbed salt water. It flowed initially at the rate of 25 bbls. hourly through a quarter-inch choke with working pressure of 1,400 pounds.

The second test, No. 2 Roane, 825 feet south of the discovery well, opened production in the 6,600-foot sand, being completed early in March at a total depth of 6,665 feet. The 7,000-foot sand was opened in the past week with the completion of No. 1 Carter, 1,282 feet east of No. 2 Roane, at 7,015-55 feet after plugging back from 9,602 feet. The latter well and the discovery well of the field are the only two not in the 6,600-foot sand. So far all development has been to the south, southeast and southwest of the discovery well. Two tests are being started still farther southward, one on the edge of Bayou Teche, for which piling now is being driven for foundations.



Driving piling for foundations for a test to be drilled on banks of Bayou Teche, St. Mary's Parish, Louisiana

Extensive Leasing Follows Discovery of Smackover Permian Production

By MITCHELL TUCKER

SHREVEPORT, La., July 6.—Active search for favorable structural traps and points of oil accumulation continues unabated throughout the Permian Basin of the Arkansas-Louisiana territory, causing the heaviest leasing and geophysical campaign ever witnessed here.

Because of the small number of deep drilled holes in this area that will permit geological correlation, the poor indications of structure afforded by surface geology, and the necessity of taking leases on short notice in the face of rising prices, operators have turned practically entirely to geophysical exploration as a guide to mapping structure and adding to their leaseholdings. The Permian was first found to be productive in southern Arkansas in April, 1936, upon completion of Phillips Petroleum Co.'s gas-distillate discovery well, No. 1 Reynolds, in section 27-15-15, Ouachita County, and the extent of geophysical activity has been steadily increasing since.

At present there are 20 seismograph, two magnetometer, and one torsion balance crews actively engaged in this search. This, of course, does not include the several crews operating in northern Louisiana south and west of the Snow Hill trend, and in the border counties of East Texas. Five of the seismograph crews are owned and operated by major companies, while the remainder are commercial crews working on a contract basis for the seven or eight companies and several independents interested in the territory. Two crews have successfully retained their unidentified sponsorship.

DIFFICULTIES OVERCOME

The Paleozoic beds present here are truncated and steeply inclined, and to map successfully this irregular basement floor requires a thorough knowledge of the geological features present. Shooting under these conditions has in some cases been difficult for the seismologist because of varying and unknown velocities of adjacent inclined beds, offering uninterpretable results, as contrasted with shooting on uniform and more nearly horizontal anhydrite sections. One major company, apparently the first to realize the difficulties involved, placed one of its most successful crews within one-fourth mile of the Reynolds discovery well. This crew seemed to appreciate that until it became entirely familiar with the velocity of beds in this locality, shooting elsewhere was a waste of time, for at Snow Hill the shooting records obtained could be checked directly with the well log. After sufficient experience was gained here, it was felt greater success in interpreting results would be obtained elsewhere.

It is of special interest to know that the early seismograph work in mapping the structure on the northeastern edge of the Smackover pool, where the Phillips discovery well was drilled, estimated the top of the lime within 1 foot of the point where it was actually penetrated by the bit.

One singular feature of the activity is the present function of the torsion balance crew. This unit is now going along the highways of sparsely explored territory running profiles in search of irregular or anomalous indications that would be worthy of more intensive investigation as possible traps for the accumulation of oil. Of course, it is not necessary to take expensive geophysical options for this work, and the procedure may possibly lead to some valuable discoveries.

It has been known for some time that any extensive exploratory work in this territory must be done by geophysical means. In a resume of geology and the occurrence of petroleum made in 1934 by the U. S. Geological Survey the following was said in this regard:

"Although the surface geology of the Arkansas Coastal Plain cannot be ignored as an essential preparatory basis for other types of exploration, virtually all of the future exploration will be guided primarily by geophysical investigations, subsurface studies, and actual drilling, with surface indications of minor importance."

This prediction has been well borne out in practice.

EXTENSIVE LEASING

Any idea of the success that is being had in mapping favorable structures by this work must, at this early date, be inferred from the persistence of the major companies in continuing to add to their holdings following and during their seismic surveys. Great portions of this territory are held in fee by large lumber companies, and the geophysical options granted here often comprise from 100,000 to 200,000 acres. In only a few instances have these options been forfeited following exploratory work with geophysical instruments. In most instances the company sponsoring the survey has taken additional holdings nearby following the completion of the work, and in several cases extensive leasing has followed.

Air view of Phillips Petroleum Co.'s well, No. 1 Reynolds, which opened Permian production in section 27-15-15, Ouachita County, Arkansas

A digest of the approximate extent and location of the geophysical activity caused by the discovery of productive Permian lime at Snow Hill, by counties in Arkansas and by parishes in Louisiana, follow:

LAFAYETTE COUNTY

Several blocks have been assembled by independent buyers in the vicinity of Township 15, Ranges 23 and 24, in LaFayette County, Arkansas. Superior Oil Co. of California has completed the assembly of a large block in Townships 18 and 19, Ranges 19 and 22, and is now preparing to drill a test to 10,000 feet. Royalties and small remaining leases are in demand within several miles of this proposed test. Seismograph crews were active in this area prior to the announcement that Superior Oil Co. would drill the test. Texas Co. has continued to add to its holdings east of Stamps, in the northeast corner of the county. George E. Failing is now sponsoring a crew near Frostville.

COLUMBIA COUNTY

Negotiations are reported to be under way for purchase of J. F. Magale's 10,000-acre block centering around section 18-19-18, which is supported by seismograph survey. Magnolia Petroleum Co. has shot the area extensively surrounding Township 15, Range 20 and has strengthened its holdings there. A few miles to the south Phillips Petroleum Co. continues to add to its 10,000-acre block in Township 17, Range 20. Root Petroleum Co. is also active here. Standard Oil Co. of Louisiana has completed its survey of a large block close to the Louisiana border in Township 19, Range 20. A Shell crew is active in the northern portion of the county, west of Stephens pool. Ohio Oil Co. has also taken holdings here after shooting in the west half of Township 15, Range 21.

OUACHITA COUNTY

Due to the fact that the Permian was first found productive in Ouachita County, Arkansas, and the fact that lands surrounding the Smackover field have long been under lease, there are now very few available leases in this county that possess favorable evidence of structure. The area around Smackover pool has been intensely shot

by Lion Oil Refining Co., Phillips Petroleum Co., Tide Water Co., and others. Two crews are now working in this immediate vicinity.

UNION COUNTY

A great deal of the land in Union County was unleased prior to the present campaign, so it has come in for a generous share of the play. Early surveys have created a sharp demand for holdings around Township 18, Range 12. Crews continue to explore in the same township, Ranges 16, 17 and 18. Portions of large lumber grants extend into the southeastern section of this county, and this territory is either being negotiated for or is under actual exploration at this time. Phillips Petroleum Co. has been quite active here, to further prove its high regard for the deep possibilities in the Snow Hill trend.

ASHLEY COUNTY

Ashley County has been leased or explored largely on large lumber company grants, but now is beginning to come in for some small lease play as certain companies and individuals are seeking protection. The activity is centered largely in the southeastern portion of the county, extending into Louisiana. A large portion of the bars and beds of the Sabine and Ouachita Rivers was recently leased by the state of Arkansas. Phillips is reported to be actively shooting a 200,000-acre block obtained on geophysical option from Crossett Lumber Co. C. H. Murphy has assembled an approximate 10,000-acre block under six months' shooting option in the southeastern part of Township 19, Range 19, and the southwestern portion of Township 19, Range 8. It is reported he is also attempting to construct a block of about the same size in the southeast of Township 19, Range 8, and the southwest of Range 7. Nemours Co. has obtained geophysical option on about 11,000 acres centering in Township 8, Range 9, and it is reported that it plans to add to its holdings here.

NEVADA COUNTY

The southeastern portion of Nevada County has not been overlooked, as buyers for the major companies have been actively buying between the old Irma pool and the Stephens pool. Benedum & Trees are now sponsoring a crew in Township 14, Ranges 19 and 20. Ohio Oil Co. continues to work in Townships 14 and 15, Range 22, while Tide Water remains active south of the Stephens pool. An unidentified crew is tapping structure in Township 15, Ranges 19 and 20, west of Stephens. Stanolind Oil & Gas Co. has previously done work here.

BRADLEY COUNTY

The southern portion of Bradley County has profited by the campaign, although Phillips Petroleum Co., apparently guided by its extensive work nearby, has been the aggressor here. After leasing and shooting a sizeable block centering in section 12-17-11 it immediately staked location for a deep test in that section. It has been reported a very favorable structure was indicated here by the seismograph. The Phillips company has also explored portions of Township 16, a few miles due north of their present location.

Due to the igneous uplift known to be present in northeastern Louisiana east of the Monroe-Amity fault, exploration in this area no doubt has a different objective. The activity, however, continues to the southeast.

UNION PARISH

Independent buyers featured the early leasing in the northeast portion of Union Parish, Louisiana, although several large lumber tracts have been obtained by the major companies. Most of the smaller leases have now been concentrated in the hands of a few, and after additional geophysical work a test of this area is reported probable. Most of the activity has been northeast of the Monroe gas field, extending south and west to the Monroe fault. Standard, Magnolia, Phillips, Pure, and Tide Water companies are prominent here. A seismograph crew, reported to be sponsored by Standard Oil of Louisiana, is now working south of Junction City.

OUACHITA PARISH

Heavy leasing and shooting has been centered in the southern portion of Ouachita Parish, extending west to the Monroe fault. The Gulf and Sun companies are in evidence here. It has been reported a block centering in section 7-16-4e was intensely shot, but abandoned after giving no indication of structure.

RICHLAND PARISH

Increased activity by Phillips Petroleum Co. in the eastern portions of Richland Parish has served to cause others to seek protection. The Phillips company now holds geophysical option on about 40,000 acres in Townships 17, 18 and 19, Range 8e, and is reported to be taking additional individual tracts before beginning geophysical work.

WEST CARROLL PARISH

The feature of West Carroll Parish activity has been that Phillips Petroleum Co. is the most aggressive here, while some have expressed the opinion that this is an indication of the good results being obtained in mapping structures in the southeastern trend from Snow Hill. The small lease-purchases by individual buyers in this Parish cannot be ignored, however. J. P. Evans of Shreveport recently took a spread of about 5,000 acres in the southwestern portion of the parish.

Officers of Committee D-2 Are Reelected at Meeting

ATLANTIC CITY, N. J., July 7.—All officers of Committee D-2, the subdivision of the American Society for Testing Materials, dealing principally with petroleum industry standards, were reelected at the annual meeting here last week. Two new members of the D-2 committee's advisory board were named to succeed men retiring.

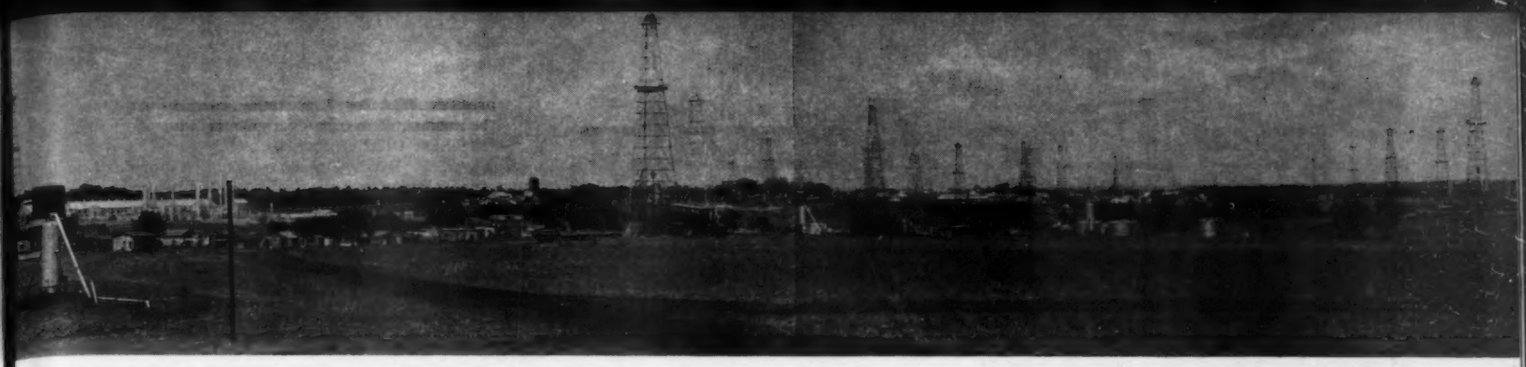
T. A. Boyd, General Motors, was reelected chairman; T. G. Delbridge, Atlantic Refining Co., was returned to the vice chairmanship, and Dr. R. P. Anderson, American Petroleum Institute, was renamed secretary. O. C. Bridgeman of the Bureau of Standards and E. W. Dean, Standard Oil Development Co., were elected to the advisory committee, replacing A. E. Flowers, DeLaval Separator Co., and J. B. Rather, Socony-Vacuum Oil Corp., retiring members. Other members of the advisory committee who will continue to function for another 12 months are Harold Farmer, Philadelphia Electric Co.; G. G. Oberfell, Phillips Petroleum Co.; T. H. Rogers, Standard Oil Co. (Indiana), and C. B. Veal, Society of Automotive Engineers.

Gasoline Absorption Plant

CALGARY, Alberta, July 4.—The new gasoline absorption plant of the British American Oil Co. in South Turner Valley has commenced test runs, and is expected to be in full operation by July 15.

A.P.I.C. REPRESENTATIVES FROM 11 STATES DISCUSS TAX PROBLEMS

Under the auspices of the American Petroleum Industries Committee, two three-day conferences have been held in New York and one in Chicago, with 35 states represented. The purpose of the meeting, at which Baird H. Markham, director of the A.P.I.C., presided, was to discuss the tax problems of the oil industry. The picture shows the Atlantic and northeastern group in session. Those present, from foreground to background: Wall left—C. E. Wells, A. P. Delahunt, William Young, Orville Thompson, Edward Sindall, A. W. Bowser, Mrs. Mary Mallon, John Gren, Grady H. Forgy. Table left—J. P. Lanigan, J. B. Campbell, Dana Brown, J. L. Marsh, Wendell Stephens, Harry J. Ward, E. J. Pease, Robert L. Graham, Jr., Edward J. Leary, Joseph Moorhead, John H. Bivins, Maj. Roy F. Britton. Table right—J. Ernest Kerr, Stinson L. Taylor, Floyd Eastman, W. P. Taylor, W. M. Irish, W. H. S. Callahan, B. O. Foster, M. G. Clark, D. T. Colley, H. G. Chase, E. R. Horstmeier, C. F. Favorite. Wall right—Maurice Wyss, Kenneth Pray, Jay Williams, V. A. Leslie, V. H. Scales, Lacey Walker, C. S. Lee, Herbert Galloway. Center—B. H. Markham.



View of the Fitts pool, Pontotoc County, Oklahoma, where bottom-hole pressures are being taken

End of Open-Flow Tests to Determine Oil Well's Capacity Foreshadowed

By L. G. E. BIGNELL

Elimination of open-flow tests to determine an oil well's capacity to produce was foreshadowed when Oklahoma operators last week agreed to accept monthly percentage declines in establishing well potentials for the six-month period starting August 1. Unanimity of the operators in accepting the percentage-decline method instead of requiring that new open-flow potentials be taken during July will result in conservation of reservoir energy. It will also avoid the accumulation of a large volume of oil above ground during the test periods. Open-flow practice in the past has tended to distort actual conditions because reports based upon pipe-line runs from the fields showed production in excess of allowable during the early part of the month. The fact that these heavy runs were offset by declines later in the month was often overlooked.

For all Class B pools it was agreed to accept a 1 per cent decline in potential for each month during the six-month period, with the exception of Sasakwa Townsite and North Searight fields, where the decline rate is to be 3 per cent per month. There are 17 pools in this Class B list with a daily potential for July of 156,366 bbls. and a reasonable market demand of 99,772 bbls. These fields contain 2,532 wells.

SIXTEEN CLASS C POOLS

There are 16 Class C pools in Oklahoma, and the operators have agreed to take a 3 per cent monthly decline in potential for the six months beginning August 1, with the exception of Billings Wilcox production, consisting of two wells, and Moore pool, three wells. The wells in Billings field will take a four-hour open-flow potential and multiply the volume produced by six to arrive at the 24-hour flow basis, while Moore wells will be produced on open flow for four hours and the last three hours gauged for potential flow rate and this figure multiplied by eight to determine the 24-hour rate.

Grayson field has not been able to make its allowable for months and is therefore permitted to flow capacity during July and will then be classed with the unprorated areas.

The operators in Fitts field having wells producing from the Upper Simpson and Wilcox zones have agreed to accept the 3 per cent decline for August only, and arranged for a meeting to consider means for arriving at future potentials by the application of some flow formula to be agreed upon later.

The operators in Fitts fields have been considering the possibility of working out some formula based upon data obtained in the past from observation of potential-decline rates and decline in bottom-hole pressures during the same periods. The characteristics of 75 wells in this field that have had no changes made in size of tubing or other conditions, nor any acidizing or shooting of the formations during a six-month period, have been used as the basis for computing these data, and it is now suggested that future potentials be based upon percentage of potential decrease equaling percentage of pressure decline multiplied by a factor. It is suggested this factor be determined by dividing the percentage of potential decrease by percentage of pressure drop, and it should serve to smooth out irregularities that might occur if straight productive-volume curves are used.

WILLING TO ALLOW TIME

Some of the operators in the Fitts field admit they are not fully conversant with the proposed methods of arriving at potentials for wells there, but have expressed willingness to allow the committee ample time fully to discuss this problem and submit recommendations. If these recommendations are satisfactory the next step will be to appear before the conservation officer for the Corporation Commission in Oklahoma City and ask for a hearing and the issuance of an order embodying the recommendations for arriving at future potentials.

It is frankly admitted that there are many mechanical and physical problems to be considered in making any satisfactory formula for establishing potentials. But on the other hand it also is recognized by operators in the Fitts field and elsewhere that there are many disadvantages in operating under the open-flow potential system of arriving at well potentials.

The July total potential for the Fitts field is placed at 926,883 bbls. daily from 329 wells in Upper Simpson and Wilcox zones. This is an average of 2,817 bbls. per well, but during July these 329 wells will be allowed to produce a total of only 46,548 bbls. of oil daily, an average of about 141 bbls. each. This means the wells have been supplied with surface equipment capable of handling about 20 times as much oil as the wells are allowed to produce each day. As a matter of fact the situation is even worse than this, for the wells were actually made suitable to handle the initial open-flow rate, and this original production capacity has since been materially reduced through the taking of subsequent potentials.

It is not assumed that it will be a simple matter to inaugurate a new system of establishing monthly potentials in any old field because many fundamental data are not available for the working out of the various curves needed to develop the formula. In Fitts field bottom-hole pressure data have been obtained periodically since the field was opened, and open-flow potentials also have been taken at regular intervals, so there is available a considerable amount of information for the engineers to use in studying well characteristics. These data must be selected from wells in which conditions have not been changed between potential-taking periods. Study of these data has led many engineers to believe it will be possible to work out a formula equitable for all operators and at the same time eliminate the loss of natural energy and the overproduction of oil when open-flow potentials are fixed.

The engineers say difficulties may arise later when the period of natural flow passes and the oil must be recovered by mechanical means. It is understood that most engineers conversant with Fitts field conditions do not consider the use of gas-lift advisable because of initial cost which would result through the installation of larger units for potential taking than would be actually needed to produce the wells on their daily allowable basis. It therefore seems likely that pumping equipment will be used, and it has been suggested that some regulations be adopted governing the pump installations limiting the maximum size of tubing to 2½ inches, the length of pumping stroke to 74 inches maximum and the diameter of pump plunger to 2¼ inches maximum, but placing no restriction on the number of strokes per minute.

LITTLE COMPLAINT HEARD

Somewhat similar rules have been in effect in Kansas and there has been little complaint on the part of producers. It is therefore believed that rules and regulations will be agreed upon in Fitts field when the time arrives for mechanical production of this oil, but in the meantime the engineers feel that conservation of reservoir energy is essential, and this can be done to some degree through elimination of open-flow potential taking.

It is recognized that it will take time and study to prepare satisfactory substitutes for the open-flow potential methods of determining well capacity, but as the operators in Oklahoma City have been cooperating with each other and with the Corporation Commission conservation officer so well, and have agreed to taking the percentage declines for the next six-month period, it is felt it will be possible to work out methods of arriving at all future potentials by some method which will eliminate open flow of wells for tests.

Having made this step in the direction of true conservation, and at the same time restricting their production to the limits set by the conservation officer's orders, based upon the state's allowable, it is felt that Oklahoma operators are doing much to point the way to the attainment of equitable production between wells in each pool, between the fields in each state, and finally between the various oil states. This is the main object of the Interstate Oil Compact Commission and will result in stabilization of the industry through preventing of overproduction and waste of this natural resource.

Pipe Line Activity

Pipe Lines Protesting Against Proposal to Reduce Rates

WASHINGTON, D. C., July 6.—Nineteen pipe line companies have filed with the Interstate Commerce Commission protests against the proposal to reduce pipe line transportation rates 35 per cent below those prevailing December 31, 1933. The companies also took exception to the minimum tender recommendation contained in the proposed report filed by J. Paul Kelley, an examiner for the commission, that companies be compelled to take crude oil shipments of less than 10,000 bbls.

The exceptions filed by the companies assert there is a proceeding pending before the commission for pipe line valuation and assert that since it is not now known what the results of this proceeding will be, the proposed report should be held in abeyance.

It is pointed out in the exception filed by the Shell Pipe Line Corp. that "the active life of an oil field is never a certain and predictable matter. The movement of oil from a given field may suddenly dwindle or disappear, either because the supply has been exhausted or because other fields, producing perhaps a higher grade of oil or more advantageously located, have been discovered."

It is thus plain, the Shell exception insists, that there is an element of risk in pipe line operation which has no counterpart in the operation of other common carriers, and which has an important bearing on the "reasonableness of rates and returns on investments."

Interest in the controversy over transportation rates centers in the fact that the price of crude oil at the well is directly affected by the pipe line rates, which constitute an important part of the cost of getting the crude to the consuming market.

Texas Empire Line Begun

PITTSBURG, Kans., July 6.—Work is getting under way on the Texas Empire Pipe Line Co. construction program for improving oil transportation facilities between western Kansas and central Illinois.

Oklahoma Contracting Co. is constructing 48 miles of the 10-inch line between Valley Center and Pittsburg. Kelley-Dempsey & Co. is building a 24-mile 12-inch loop on the main line near Lowry City, Mo.; and Williams Brothers Construction Co. is constructing two 12-inch loops, totaling 38 miles at the eastern end of the work projected in Illinois.

The new 10-inch line from Valley Center, Kans., provides a direct route for western Kansas oil to Illinois refineries by connecting to the Texas Empire main line extending from Oklahoma across the southeastern corner of Kansas and across Missouri to points in Illinois. The loops under construction in the main system are to help handle the increased load from the 10-inch line.

White Eagle Line

Williams Brothers, Tulsa, have been awarded the contract for electric welding the 178 miles of 6-inch pipe used in construction of the new gasoline line being built by White Eagle division of Socony-Vacuum Oil Co. between Augusta and Kansas City, Kans. Work is to start July 12.

New Kansas Line

A survey is being made and work is due to start soon on a new 6-inch pipe line that will serve the rapidly growing producing areas in northern Ellis and southern Rooks Counties, Kansas. Stanolind Pipe Line Co. will lay the new line from a connection with its outlet in northwestern Russell County to the Bemis area, in Ellis County, and possibly on to the Zurich district in Rooks County. The Stanolind company already has a 4-inch line serving the Shutts and Bemis areas in northern Ellis County, but in view of the growing importance of the Ellis-Rooks County sector as producing territory the company will be in better position to serve the oil producers with the larger line. The Kaw pipe line serves central and southern Ellis County, which now has more wildcat activity than any other Kansas county.

For New Extension

The Gas Corp. of Michigan will start soon laying 4 miles of additional line to connect new gas wells in a recent extension of the Vernon Township field, Isabella County, into Gilmore Township. Three wells will be tied into the company's main line now serving Mount Pleasant, Clare and other central Michigan communities from the original fields in Vernon Township, near Rosebush and in Clare County.

Two Contracts Awarded

The general contract for laying the 300 miles of 8-, 10- and 12-inch pipe line between Bakersfield and Martinez, Calif., for the Shell Oil Co. of California has been awarded to Lindgren & Swinerton, Inc., of Los Angeles, Calif. H. C. Price, Inc., Bartlesville, Okla., has received the contract for electric-welding this pipe.

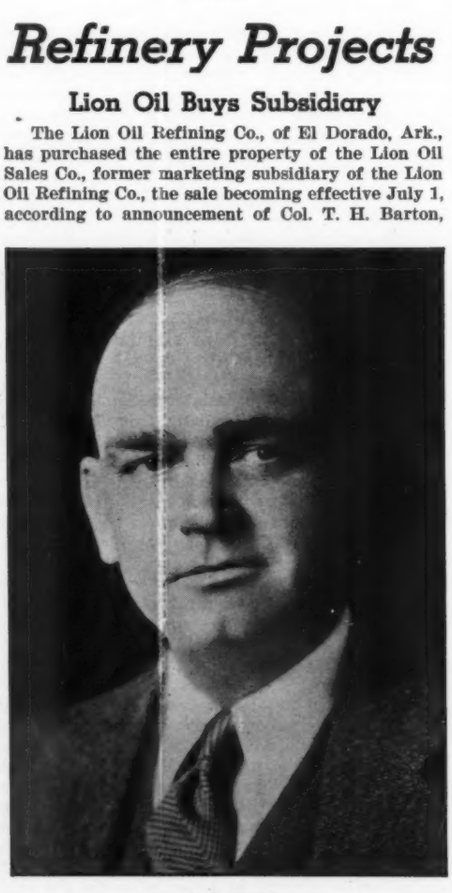
Pipe Line Transfer

FORT WORTH, Tex., July 6.—The Tide Water Pipe Line Co. is taking over the Texas Pipe Line Co.'s gathering system in the Cayuga field in northwest Anderson County. This line ties into the Texas Pipe Line Co.'s main line which runs from the northwest to the southeast on the northeast side of the field. The gathering system is connected to 50 wells which have a daily allowable of 2,150 bbls.

Refinery Projects

Lion Oil Buys Subsidiary

The Lion Oil Refining Co., of El Dorado, Ark., has purchased the entire property of the Lion Oil Sales Co., former marketing subsidiary of the Lion Oil Refining Co., the sale becoming effective July 1, according to announcement of Col. T. H. Barton, president. After July 1, marketing operations of the company will be carried on under the name of the Lion Oil Refining Co.



A. F. REED

A. F. Reed, for six years vice president and general manager of the Sales company, has been elected vice president and placed in charge of all sales. Mr. Reed is well known in oil circles, having been engaged in the oil business in the South and Mid-West for many years. He organized the Sales company in 1930 and extended the marketing operations of that company over Arkansas and into Mississippi, Tennessee and Alabama.

Mr. Reed will have direct charge of all the selling activities of the company, handling tankcar sales of all petroleum products and by-products for the refining division as well as continuing to direct the sales of the marketing division. He will be assisted in the marketing division by F. M. Rider as manager of station sales and C. R. Olsen as sales promotion manager. Mr. Rider has been connected with the Sales company for the past year.

Arkansas Refineries Sold

SHREVEPORT, La., July 4.—J. E. Shatford, past president of the Louisiana-Arkansas Refining Association, recently acquired the 2,500-bbl. skimming and cracking refinery of the Ouachita Valley Refining Co. at El Dorado, Ark. This plant has not been operating for some time.

The 3,000-bbl. Simms refinery at Smackover, Ark., has been purchased by Louisiana Iron & Supply Co. of Shreveport. It is reported that the Premier Refining Co. of Longview and Octane Refining Co. of Bath, Tex., have taken options to buy the plant from its present owner, presumably upon the contingency that sufficient oil production is developed from Permian lime exploration to warrant its operation. This plant has been shut down for several months.

Rado to Increase Capacity

McALLEN, Tex., July 6.—Improvements and additions costing $40,000 and doubling the capacity of the Rado Refining Co.'s refinery, located here, were authorized by the stockholders at a recent meeting, according to an announcement by C. J. Holland, president of the company. The expansion program has already been started with the purchase of additional acreage near the refinery site. Concrete foundations are now being poured preparatory to the arrival and installation of the machinery. Operation of the new units is expected to start about October 1.

Erecting Skimming Plant

DALLAS, Tex., July 6.—W. H. Peckham of Wichita Falls, is erecting a 500-gallon skimming plant at Stamford in northern Jones County, Texas, to operate on crude which is to be trucked from the Luederes and Hawley pools in that county. Two plants are operating in or near Hawley pool on crude from the high gravity producing field, which does not have a major pipe line outlet.

Polymerization Unit Completed

CHICAGO, July 6.—Sinclair Refining Co. has completed construction of its new polymerization unit at East Chicago and will place the new unit in operation immediately. The new unit is of the catalytic type, developed and licensed by Universal Oil Products, and will operate on cracked gases.

Charge Patent Infringement

CHICAGO, July 7.—Infringement of two cracking patents is charged in a lawsuit just begun by Universal Oil Products Co., owner of the Dubbs cracking process, against the Chalmette Petroleum Corp., Chalmette, La.

Universal's bill of complaint was filed June 23 in the U. S. District Court for the Eastern District of Louisiana at New Orleans.

The patents are No. 1,392,629, issued to Carbon P. Dubbs and known as the clean-circulation patent, and No. 1,537,593, issued to Gustav Egloff, and known as the multiple coil selective cracking patent. Both have been assigned to Universal.

Natural Gas News

E. F. Schmidt Appointed Lone Star Gas Vice President

Elmer F. Schmidt, general superintendent of the Lone Star Gas Co., has been made a vice president of the company, L. B. Denning, Lone Star president, announced last week. Julian L. Foster, chief engineer for Lone Star, was appointed general superintendent, combining the duties of chief engineer with those heretofore performed by Mr. Schmidt as general superintendent.

E. F. SCHMIDT

Born in Binghampton, N. Y., in 1889, Mr. Schmidt is a graduate of Cornell University. His first job after receiving his civil engineering degree in 1912 was with the engineering department of the Ohio Fuel Supply Co. at Charleston, W. Va. In 1917 he became associated with the gas measurement department of the Ohio Fuel Supply Co. and while in this position he aided materially in developing the orifice meter mercury differential, a recording gauge for high-pressure gas measurement.

In June, 1918, Mr. Schmidt joined the Lone Star, coming to Dallas to take charge of gas measurement and in 1920 was made general superintendent. He is a member of the A.S.M.E. and Cornell Engineering Club.

Julian Foster, new general superintendent, is a native of Fort Worth, Tex. He received his engineering degree from Texas A. & M. College and entered the Lone Star service in 1918.

Columbia's Eastern Expansion

United Gas Improvement Co. is negotiating with the Pennsylvania Public Service Commission and officials of Columbia Gas & Electric Corp. for a supply of natural gas to four of the subsidiary gas companies owned and operated by U.G.I. Co. in Pennsylvania, Allentown-Bethlehem Gas Co., Consumers Gas Co. of Reading, Lebanon Valley Gas Co. and Harrisburg Gas Co. A statement by the company says:

"Plans are being informally discussed with the Public Service Commission by the officers of the gas companies in which United Gas Improvement is interested, operating in Allentown, Bethlehem, Reading, Lebanon and Harrisburg with a view to the introduction of natural gas to those cities which will provide their customers with a better and lower price service."

The four companies are now using manufactured gas and it is contemplated their entire requirements will be supplied by Columbia Gas. The change over cannot be accomplished before the summer of 1937. The four gas companies would be interconnected receiving gas from the Columbia pipe line which extends as far east as Coatesville, Pa., and probably from other small lines which Columbia has through the state, one of which approaches Reading, Pa.

Plans are also under consideration for supplying natural gas to the city of Wilmington, Del., now supplied by Wilmington Gas Co., a subsidiary of U.G.I.

U.G.I. owns 100 per ce..t of the Allentown-Bethlehem Gas Co. stock, substantially all of the Lebanon Valley Gas Co. stock, and controlling interest in Consumers Gas Co., of Reading and Harrisburg Gas Co., the U.G.I. interests in these two being about 60 per cent.

Arrangements by which Columbia Gas & Electric Co. will supply natural gas to Philadelphia are nearing completion. Columbia gas lines along the southern border of Pennsylvania and the line running through West Virginia, Virginia and Maryland converge near Philadelphia and a branch of the systems reaches the city limits.

Agreement probably will provide for a supply of gas to be mixed with artificial gas output of the Philadelphia municipal gas works.

The municipal system is operated by Philadelphia Gas Works Co., a subsidiary of United Gas Improvement Co., on a management contract basis, the contract provides the rates are to be based on cost of service and the city is to receive $4,200,000 a year; $2,000,000 a year to be spent out of revenues on improvements and the company to get $800,000 a year and may get up to $1,100,000 a year depending on sales and economies effected. An affiliation of interests exists between United Gas Improvement and Columbia Gas. United Corp. has a 20 per cent stock interest in Columbia Gas and a 26 per cent interest in United Gas Improvement.

The arrangement will go far toward solving Columbia's problem of securing adequate markets for its fields and transportation system developed just before the depression.

Recently Columbia started work on a line from the end of the Panhandle Eastern Pipe Line at the Indiana-Illinois border to Detroit, giving a new outlet for the Panhandle system in which Columbia has a large interest.

Natural Gasoline

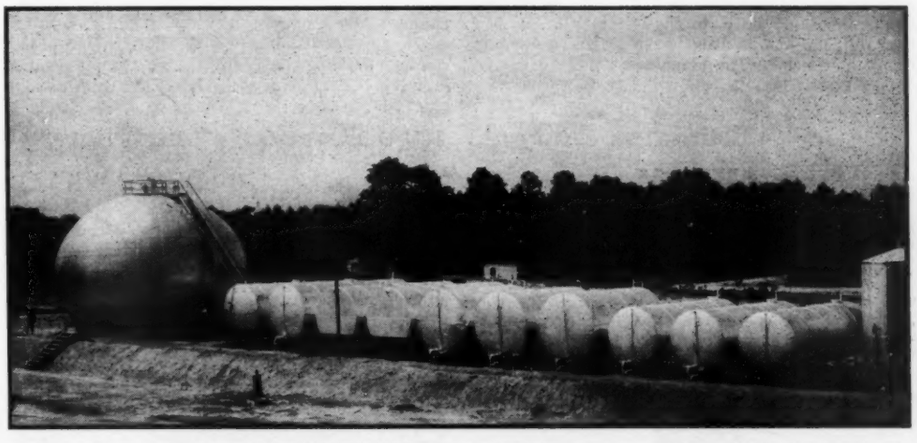
Standard Planning New Plant

FORT WORTH, Tex., July 6.—Standard Gasoline Co., subsidiary of Standard Oil Co. of California, is planning the erection of a natural gasoline plant on its Durgin lease in section 15, Block 35, H.&T.C. Survey, southern Ward County, Texas. Gasoline produced in the plant will be batched through Atlantic Pipe Line Co.'s line to Winkler County, where it will be taken over by a Standard Oil Co. of Texas line and moved to the company's refinery at El Paso. Daily capacity of the plant will be 20,000,000 feet.

Clymore Addition Completed

HOUSTON, Tex., July 6.—The Clymore Co., Inc., has completed the installation of 1,000-pound, highpressure absorption equipment throughout that company's 30,000-gallon natural gasoline plant at Refugio, Tex. The purpose of this expenditure of $30,000 was to facilitate the handling of Refugio gas at high pressures, utilizing the residue gas for the production of oil in the old Refugio field. This eliminates entirely the wastage of gas in this section, complying with the conservation rules of the state of Texas.

NEW TANK BATTERY OF ARKANSAS-LOUISIANA GAS CO.



The Arkansas-Louisiana Gas Co. is making adjustments and enlargements to its Rodessa gasoline plant to care for more of the gas now being wasted in that field. The new absorption plant will have a capacity of 50,000 gallons.

Shown in the accompanying photograph is the recently completed tank battery for gasoline storage. At the left of the battery is shown a Horton Spheroid. This tank is scientifically designed to evenly distribute the internal working stresses in such a manner that the entire load is carried as a tensile stress in the metal sheets, thus eliminating all appreciable outward thrust. It is electrically welded, resting on a sand foundation, 36 feet in height, and has a total capacity of 210,000 gallons.

The remainder of the battery consists of four 10 by 30-foot tanks of 18,000-gallon capacity; three 10 by 20-foot tanks of 12,000-gallon capacity; three 7 by 25-foot tanks of 10,000-gallon capacity, and a vertical tank 10 by 16 feet. The total capacity of the battery is a little more than 350,000 gallons.

Another installation recently completed was a new Fluor cooling tower to be used in cooling the water from 105 to 85 degrees at a wet bulb temperature of 80 degrees. The tower is made of California redwood, fastened together with brass hardware.

Refinery Operations in Mid-Continent During July Set New Peak for Year

By D. H. STORMONT

Crude runs to refineries in the Mid-Continent are being increased by approximately 12,000 bbls. during the month of July, according to estimates made at the first of the month, establishing a new peak for the present year. Daily runs for the month will total 539,370 bbls. and represent an increase of 45,000 bbls. or 9 per cent over July of last year. Thus with gasoline consumption approximately 7 per cent higher than in 1935, stocks of motor fuel should continue to dwindle throughout the month.

For the past few months Mid-Continent refiners have been holding their crude runs about 10 per cent higher than those of last year, and while gasoline stocks held by these refiners reached an alarmingly high point, they have declined with the advent of the motoring season, and on June 27 were about 9 per cent higher than at that time last year, according to A.P.I. reports. Therefore, the stocks of motor fuel that were for a while thought to be too burdensome may prove to be only satisfactory working stocks since many refiners reached a point last fall where they were operating with stocks below an economic level.

NORTH LOUISIANA

A great portion of the increase over June runs may be attributed to the increased activity in North Louisiana. In that section runs are being increased by a total of 7,500 bbls. daily and point to the increased importance of that district as a refining center. During July of last year crude runs to stills in this district totaled 22,750 bbls. daily, whereas at the present time total runs are 45,500 bbls. daily. Total daily capacity of refineries of North Louisiana has increased from 56,950 bbls. in July, 1935, to its present daily capacity of 70,950 bbls. Shoreline Oil Co., operators of a refinery at Lewis, account for 4,400 bbls. of the increase in this district. The company recently enlarged its refinery from 1,000 bbls. to 5,000 bbls. daily and has now boosted daily runs in proportion. Another new refinery in this area is the North Caddo Refinery at Rodessa. The plant has a daily capacity of 1,000 bbls. and is being operated at the rate of 400 bbls. daily during the month of July.

Refineries now shut down in Arkansas hope to resume operations if Permian production from Snow Hill can be obtained, while several other refineries in that area, now operating, plan to increase their refining schedules if additional crude can be obtained. The Simms Co. refinery at Smackover has been purchased by Louisiana Iron & Supply Co. of Shreveport, and it is reported that two East Texas operators have taken options to buy the plant. The plant, which has a capacity of 3,000 bbls. daily, has been closed down for the past 18 months. Another Arkansas plant recently changing hands is the Ouachita Valley Refining Co. plant at El Dorado.

Refining operations in both Kansas and Oklahoma were slightly decreased with practically all of the refining companies holding their July runs on the same level with those of June. In East Texas total runs were increased 2,500 bbls. daily.

EAST TEXAS

One transaction of particular note taking place recently in the East Texas area was the merging of the oil interests of three operators in that pool to form the General American Oil Corp. Included in the physical properties involved were three refineries, one of which was the Gilliland plant at Gladewater, now known as General American No. 1; another, at Overton, now known as General American No. 2; and the third, formerly known as McMurray Refining Co., now known as General American No. 3. Headquarters of the company will be in Shreveport, with J. W. Gilliland as president. Another transaction taking place was the leasing of the Admiral Refining Co. plant at Kilgore to the Royal Oil & Refining Co. of Houston. Plants recently dismantled in this district were those of the Hub Refining Co. at Reed Switch, the North Texas Refining Co. at Gladewater and the Texas State Refining Co. at Kilgore.

Texas Panhandle and North Central Texas also showed slight increases. Allstate Refining Co. was expecting to shut down its Thrall plant early in the month so that the total for that district will be 1,000 bbls. less for the remainder of the month. The increase of 4,320 bbls. in the Panhandle was due for the greater part to increased runs at the Big Spring refinery of Cosden Oil Co. However, the majority of refiners in that area will continue with but little change in their refining schedules; a condition that might be said to hold true for the whole Mid-Continent during July.

Mid-Continent Crude Runs

Average Daily (Barrels)

(Advance estimate compiled by The Oil and Gas Journal)

	1934	1935	1936
January	448,360	426,070	501,600
February	456,619	448,810	519,960
March	465,680	451,510	478,760
April	458,220	467,765	506,775
May	457,165	466,015	513,510
June	459,908	485,015	527,225
July	477,012	494,210	539,370
August	501,750	508,960	.....
September	499,830	541,080	.....
October	500,755	523,620	.....
November	500,445	524,475	.....
December	440,735	511,025	.....

Operation by Refinery Districts

Daily crude runs

	July	June	Inc.
Arkansas	21,950	21,900	50
East Texas	61,480	59,000	2,480
Kansas	126,790	127,390	*600
N. Central Texas	39,160	38,785	375
North Louisiana	45,500	38,000	7,500
Oklahoma	157,380	159,260	*1,880
Southwest Texas	18,760	18,860	*100
W. Tex.-Panhandle	68,750	64,430	4,320
Total	539,370	527,225	12,145

*Decrease.

Estimated Daily Average Mid-Continent Refinery Crude Runs for July

ARKANSAS

Company and location—	Daily capacity	Av. daily runs July	Av. daily runs June
Berry Asphalt Co., Waterloo	2,000	1,200	1,200
Henry H. Cross Co., Smackover	6,000	4,500	4,500
Lion Oil Ref. Co., El Dorado	12,000	9,000	9,000
Macmillan Pet. Corp., Norphlet	2,500	2,000	2,000
Ouachita Valley Ref. Co., El Dorado	2,500	(*)	(*)
Root Pet. Co., El Dorado	10,000	5,000	5,000
Simms Co., Smackover	3,000	(*)	(*)
Stephens Ref. Co., Stephens	750	250	200
Total	38,750	21,950	21,900

*Shut down.

KANSAS

Barnsdall Oil Co., Wichita	4,000	3,300	3,500
Chase Ref. Co., Chase	1,000	550	500
Cusco Oil & Ref. Co., Chase	3,100	1,000	1,000
Derby Oil Co., Wichita	8,000	6,500	6,500
Dickey Ref. Co., McPherson	2,500	1,700	1,700
Eldorado Ref. Co., Eldorado	5,000	4,000	4,000
Falcon Ref. Co., Inc., Great Bend	800	650	550
Globe Oil & Ref. Co., McPherson	12,000	7,000	7,000
Kanotex Ref. Co., Arkansas City	12,000	6,500	6,500
Kansas Gasoline Co., Winfield	150	40	40
Kreuger Ref. Co., Laton	150	50	50
National Ref. Co., Coffeyville	8,000	5,500	5,500
Pet. Products Co., Chanute	1,000	800	800
Phillips Pet. Co., Kansas City	18,000	13,450	14,000
Russell Ref. Co., Russell	2,500	1,250	1,250
Shell Petroleum Corp., Arkansas City	20,000	18,000	18,000
Sinclair Ref. Co., Coffeyville	20,000	8,500	8,500
Sinclair Ref. Co., Argentine	11,000	7,000	7,000
Skelly Oil Co., Eldorado	22,000	18,500	18,500
Socony-Vacuum Oil Co., Inc., Augusta	16,000	15,000	15,000
Standard Oil Co. (Indiana), Neodesha	20,000	4,500	4,500
Vickers Pet. Co., Potwin	3,500	3,000	3,000
Total	191,700	126,790	127,390

*Shut down.

NORTH LOUISIANA

Acme Ref. Co., Monroe	100	50	50
Atlas Pipe Line Co., Shreveport	12,500	9,000	7,500
Bayou State Oil Corp., Hosston	750	400	300
Griswold Refineries, Shreveport	2,500	1,000	1,000
Griswold Refineries, Sandra	5,000	2,500	2,500
Louisiana Oil Ref. Co., Bossier City	26,000	20,000	19,500
North Caddo Refinery, Rodessa	1,000	400	400
Pelican Ref. Co., Converse	100	50	50
Rodessa Oil & Ref. Corp., Cedar Grove	7,500	3,600	4,100
Shoreline Oil Co., Lewis	5,000	4,000	600
Stanolind Oil & Gas. Co., Superior	4,500	4,500	2,000
Texas Co., Shreveport	7,000	(*)	(*)
Total	70,950	45,500	38,000

*Shut down.

OKLAHOMA

Company and location—	Daily capacity	Av. daily runs July	Av. daily runs June
Anderson-Prichard Oil Corp., Cyril	6,000	4,500	4,500
Associated Pet. Corp., Allen	8,000	(*)	(*)
Barnsdall Oil Co., Barnsdall	6,000	3,500	3,500
Barnsdall Oil Co., Okmulgee	10,000	3,200	5,000
Bell Oil & Gas Co., Grandfield	4,500	2,800	2,800
Black Gold Ref. Co., Oklahoma City	3,000	2,000	2,000
Century Pet. Corp., Oklahoma City	2,500	(*)	(*)
Champlin Ref. Co., Enid	16,000	6,500	6,500
Continental Oil Co., Ponca City	30,000	22,600	24,000
Crescent Ref. Co., Holdenville	1,000	(*)	(*)
Cushing Ref. & Gasoline Co., Blackwell	1,700	1,500	1,500
Cushing Ref. & Gasoline Co., Cushing	6,200	2,500	2,500
Deep Rock Oil Corp., Cushing	10,000	9,000	9,000
Eason Oil Co., Enid	5,000	2,500	2,500
Empire Oil & Ref. Co., Okmulgee	4,000	2,500	2,500
Empire Oil & Ref. Co., Ponca City	12,000	9,000	9,000
Globe Oil & Ref. Co., Blackwell	8,000	3,500	3,500
Government Ref. Co., No. 3, Seminole	800	(*)	(*)
Johnson Oil Ref. Co., Cleveland	6,000	4,000	4,000
Marathon Oil Co., Bristow	5,000	2,900	2,700
Mid-Continent Pet. Corp., West Tulsa	40,000	18,000	18,000
Monarch Ref. Co., Oklahoma City	2,000	750	900
Olympic Ref. Co., Oklahoma City	2,500	(*)	(*)

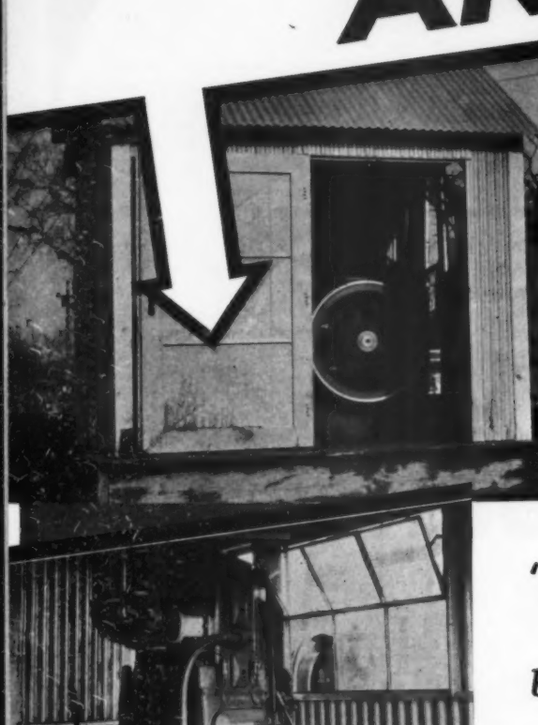
LINE UP WITH TUBE-TURNS!★

TO MAKE a good, strong joint, welding fittings must line up *exactly* with both the inside and outside diameter of the pipe . . . Welding fittings must be lined up with the pipe from the outside. Fittings with non-uniform walls may match either the I. D. or the O. D. of the pipe. *They can't match both.* If they match only in O. D., a shoulder is formed on the inside, restricting flow and accelerating corrosion. If they match only in I. D., correct alignment is extremely difficult and erection is slowed up. ¶ Tube-Turns line up perfectly with the pipe—*match* it at *all* points . . . Result: Low welding costs, strong joints, minimum pressure-loss, long life . . . That's why more people *line up with Tube-Turns* than with any other fittings for pipe welding.

¶ Tube-Turns, *Incorporated*,
Herald-Post Building,
Louisville, Ky.

★ **The word "Tube-Turn" is NOT a general name for welding fittings. Tube-Turns are THE seamless fittings having uniform wall-thickness at all points, true circular cross-section, uniform radius of curvature and smooth inner walls. Made ONLY by Tube-Turns, Incorporated.**

We told you it was going to be "GOOD AND IT IS!



The New Type G-SD

"BE SURE you are right. Then go ahead." That's what we did with this new Vertical Pumping engine. RESULT — field performance is even *better* than we predicted! Users are elated.

Field records PROVE that Type G-SD *slashes pumping costs.* Reasons? A whole score of them! For example, take these:

(1) Crosshead design cuts lube-oil consumption. (2) Better scavenging and operating economies. (3) Easier starting, less down-time, low maintenance expense — because of Timken main roller bearings, and pressure lubricating system. (4) Die-forged crankshaft and connecting rods, drilled for pressure lubrication.

Let our representative go over this *good engine* with you, point by point. Then you'll *know why* it is so convenient, so reliable, so economical. Meanwhile, send for folder.

TEXAS — photo at left shows Magnolia Petroleum Company's Type G-SD vertical gas engine, pumping J. C. Baldwin No. 1 and No. 2 wells near Clarkwood.

OKLAHOMA — photos at top and center show Carter Oil Company's Type G-SD vertical gas engine, pumping No. 2 well in Oklahoma City field.

THE COOPER-BESSEMER CORPORATION

Mt. Vernon, Ohio — PLANTS — Grove City, Pennsylvania

25 West 43rd St., New York City
Mills Bldg., Washington, D. C.
640 East 61st St., Los Angeles, Calif.
201 E. 1st St., Tulsa, Oklahoma
631 Spring St., Shreveport, La.
Magnolia Bldg., Dallas, Texas
Esperson Bldg., Houston, Texas

L. W. Rogers, 6 Finsbury Square, London, E. C. 2

Company and location—	Daily capacity	Av. daily runs July	Av. daily runs June
Omar Ref. Co., Garber	8,000	2,700	2,800
Paramount Ref. Co., Oklahoma City	2,000	(*)	(*)
Peacock Ref. Co., Oklahoma City	2,000	(*)	(*)
Peppers Gasoline Co., Oklahoma City	500	200	200
Phillips Pet. Co., Okmulgee	6,000	5,480	5,000
Pure Oil Co., Muskogee	10,000	8,000	8,000
Rock Island Ref. Co., Beckett	6,000	2,500	2,500
Sinclair Ref. Co., Sand Springs	8,000	4,500	4,500
Sooner State Ref. Co., Oklahoma City	700	450	460
Sun Oil Co., Yale	5,000	2,000	2,000
Sunray Oil Co., Allen	7,000	4,100	3,200
Texas Co., West Tulsa	15,000	11,000	11,000
Tide Water Oil Co., Drumright	15,000	12,500	12,500
Triangle Prod. & Ref. Co., Oklahoma City	1,500	1,000	1,000
S. L. West Ref. Co., Oklahoma City	1,000	200	200
Wilcox Oil & Gas Co., Bristow	6,000	1,500	1,500
Wirt Franklin Pet. Corp., Ardmore	4,000	(*)	(*)
Yale Oil Corp., Yale	2,000	(*)	(*)
Total	289,900	157,380	159,260

*Shut down.

EAST TEXAS

Company and location—	Daily capacity	Av. daily runs July	Av. daily runs June
Acme Ref. Co., Longview	1,250	(*)	(*)
Ardell Ref. Co., Gladewater	1,250	(*)	(*)
Artex Ref. Co., Arp	1,200	(*)	(*)
Ash Ref. Co., Gladewater	1,500	(*)	170
Bartlett Ref. Co., Kilgore	2,500	(*)	(*)
Beacon Ref. Co., Henderson	4,000	(*)	(*)
Caddo Ref. Co., Camp Switch	1,000	(*)	(*)
Cascade Ref. Co., Reeds Switch	3,000	(*)	440
Central Ref. Co., Gladewater	2,000	(*)	(*)
Century Ref. Co., Friars Switch	2,500	(*)	(*)
Chief Ref. Co., Gladewater	2,000	160	(*)
Clay Ref. Co., Arp	2,500	545	1,000
Danciger Refineries, Inc., Longview	10,000	5,000	3,500
Deason Ref. Co., Turnerstown	500	(*)	(*)
Dominant Ref. Co., No. 1, Kilgore	4,000	(*)	(*)
Dominant Ref. Co., No. 2, Kilgore	2,000	(*)	(*)
East Texas Ref. Co., Longview	10,000	8,000	2,100
Elk Ref. Co., Kilgore	4,000	(*)	(*)
General American Ref. Co. No. 2, Arp	4,000	2,500	2,400
General American Ref. Co. No. 1, Gladewater	4,000	2,880	3,100
General American Ref. Co. No. 3, Overton	5,500	3,200	3,180
Glade Ref. Co., Gladewater	1,000	(*)	(*)
Goodson Ref. Co., Gladewater	1,000	(*)	(*)
Hurricane Pet. Corp., Overton	5,000	3,500	4,000
Hurricane Pet. Corp., Arp Ref., Arp	3,000	2,095	1,790
H. I. Johnson Ref. Co., Kilgore	1,000	(*)	(*)
Keystone Ref. Co., Gladewater	1,000	130	35
Kilgore Reclamation Co., Kilgore	2,000	(*)	(*)
Kil-Tex Ref. Co., Kilgore	1,000	(*)	(*)
Lago Ref. Co., Gladewater	2,500	(*)	400
La Petite Ref. Co., Henderson	900	(*)	(*)
La Pren Ref. Co., Kilgore	2,500	(*)	(*)
Lone Star Ref. Co., Gladewater	3,000	2,530	2,600
Lotus Ref. Co., Gladewater	1,750	245	(*)
Magnolia Pet. Co., Corsicana	5,000	4,000	4,000
Master Pet. Co., Waco	1,000	(*)	(*)
Morgan Ref. Co., Camp Switch	1,000	(*)	(*)
Matthews Ref. Co., Gladewater	1,000	(*)	(*)
Ocean Pet. Corp., Kilgore	3,000	970	410
Outdoor Ref. Co., Kilgore	900	(*)	(*)
Overton Ref. Co., Overton	3,000	(*)	(*)
Ozozo Ref. Co. No. 2, Overton	10,000	(*)	(*)
Panama Ref. Co., Kilgore	3,000	(*)	450
Petroleum Cracking Corp., Camp Switch	4,200	(*)	(*)
Premier Oil Ref. of Texas, Willow Springs	4,000	2,590	3,400
Producers Oil & Ref. Co., Kilgore	3,000	(*)	(*)
Royal Oil & Ref. Co., Kilgore	3,000	475	310
Rusk Oil & Ref. Co., Overton	4,000	165	(*)
Sabine Ref. Co., Gladewater	500	(*)	(*)
Sinclair Ref. Co., Camp Switch	3,500	2,000	2,000
Smith Ref. Co., Gladewater	1,500	(*)	(*)
Solvex Refineries, Inc., Gladewater	4,500	2,360	2,200
Southern Oil Ref. Co., Reeds Switch	2,000	(*)	(*)
Southport Pet. Co., Kilgore	5,000	3,000	1,980
State Ref. Co., Kilgore	800	(*)	(*)
Supreme Ref. Co., Gladewater	1,000	(*)	(*)
Swastika Ref. Co., Kilgore	2,200	(*)	(*)
Texas Co., The, Dallas	16,000	8,000	8,000
Texas National Ref. Co., Gladewater	1,500	(*)	160
Texas Oil Products Co., Longview	3,000	1,520	1,350
Trinity Ref. Co., Gladewater	6,000	2,000	2,000
Tower Ref. Co., Overton	3,000	1,200	2,000
Tyler Tex. Ref. Co., Tyler	10,000	2,365	2,790
Union Ref. Co., Kilgore	3,000	(*)	(*)
Upshur Ref. Co., Gladewater	750	(*)	(*)
Utah Ref. Co., Kilgore	3,000	(*)	(*)
View Ref. Co., Kilgore	2,000	(*)	(*)
Wabash Ref. Co., Gladewater	800	(*)	170
Western Ref. Co., Gladewater	1,500	(*)	(*)
Western States Ref., No. 2, Kilgore	3,000	(*)	(*)
Wilemon Ref. Overton	500	(*)	125
Youth Ref. Co., Big Sandy	1,000	(*)	(*)
Total	228,750	61,480	59,000

*Shut down.

NORTH CENTRAL TEXAS

Company and location—	Daily capacity	Av. daily runs July	Av. daily runs June
Allstate Ref. Co., Thrall	2,500	1,000	1,000
Baird Ref. Co., Baird	1,500	1,500	1,300
Canyon Oil & Gas Co., Inc., Cisco	500	(*)	(*)
Continental Oil Co., Wichita Falls	6,000	4,000	4,000
Empire Oil & Refining Co., Gainesville	5,000	(*)	(*)
Exchange Pet. Corp., Albany	800	300	300
Falls Ref. Co., Wichita Falls	2,000	300	300
Gratex Ref. & Fuel Oil Co., Graham	300	290	285
Gulf Ref. Co., Fort Worth	10,000	4,500	5,000
Haskell Oil Ref. Co., Breckenridge	200	(*)	(*)
Hightower Oil & Ref. Corp., Brownwood	750	150	150
Imperial Gas Corp., Fort Worth	1,200	300	300
Jacksboro Ref. Co., Jacksboro	50	50	50
La Salle Pet. Co., Burkburnett	3,500	850	800
Magnolia Pet. Co., Fort Worth, No. 1	12,000	5,000	5,000
Marathon Oil Co., Fort Worth	5,000	4,195	4,300
Norgold Ref. Co., West Olney	400	200	200
Olney Oil & Ref. Co., North Olney	3,500	1,800	2,000
Omega Ref. Co., Brownwood	200	(*)	(*)
Panhandle Ref. Co., Wichita Falls	4,000	2,800	2,700
Panhandle Ref. Co., Leuders	1,000	650	650
Pilot Point Ref. Co., Pilot Point	500	100	100
Sinclair Ref. Co., Fort Worth	5,000	3,000	3,000
Southland Ref. Co., Megargel	500	200	200
Southland Ref. Co., Olney	1,000	(*)	(*)
Superior Ref. Co., Tiffin	800	(*)	(*)
Taylor Ref. Co., Taylor	6,000	800	800
Taxman Ref. Co., Wichita Falls	3,500	2,800	2,500
Texas Pacific Coal & Oil Co., Caddo	1,000	700	700
Tucker Ref. Co., Wichita Falls	250	175	150
Wagoner Ref. Co., Electra	6,000	3,500	3,000
Total	84,950	39,160	38,785

*Shut down.

SOUTHWEST TEXAS

Company and location—	Daily capacity	Av. daily runs July	Av. daily runs June
Amsco Ref. Co., Mirando City	4,500	3,500	3,500
Humble Oil & Ref. Co., San Antonio	5,000	3,000	3,000
Magnolia Pet. Co., Luling	7,000	4,000	4,000
Midway Oil & Ref. Co., Pettus	1,000	500	500
Pettus Ref. Co., No. 1, Pettus	1,000	500	500
Pettus Oil & Ref. Co., No. 2 Pettus	1,000	700	700
Pettus Ref. Co., Mathis	1,000	500	500
Phoenix Ref. Co., San Antonio	1,200	1,200	1,200
Phoenix Ref. Co., Bruni	900	400	400
Pioneer Oil & Ref. Co., Somerset	2,000	1,200	1,300
Rado Ref. & Prod. Co., McAllen	500	200	200

OBITUARIES

THOMAS JONES SUGARS, 58, for many years associated with oil development in the Turner Valley and Wainwright fields, died recently at Edmonton, Alberta.

CLARENCE E. BENTON, 75, retired superintendent of the Tide Water Pipe Co. trunk lines, died in Bradford, Pa., on July 2. He started work for the company in 1878 as a gauger and retired in 1923.

ROBERT G. CRIPPEN, 52, production superintendent of the Chartiers Oil Co., Mount Pleasant, Mich., and Pittsburgh, Pa., died following an emergency operation in a Mount Pleasant hospital.

FRANCIS J. McKENNA, 65, prominent in the development of the Cement oil field, in Oklahoma, died in a hospital in Chickasha, Okla. Mr. McKenna went to Oklahoma in 1907 from Kansas. He leaves his wife and four sons.

DAVID A. DENNISON, for several years editor of The Oil and Gas Journal, died at his home in Olean, N. Y., on Thursday, July 2. He was on the editorial staff of the Olean Herald at the time of his death. Mr. Dennison, who was 80 years old, had been a newspaperman for about 50 years. He joined The Oil and Gas Journal staff in 1913 and continued with this publication until late in 1921, when he returned to his former home in Bradford, Pa., to re-enter daily newspaper work.

ROBERT B. WHITEHEAD, 48, chief geologist of the Atlantic Oil Refining Co., Dallas, Tex., died in Grace Hospital at Detroit, Mich., on July 1, following a long illness. Mr. Whitehead was born in Mount Pleasant, Mich., in 1889, attended Central State Normal in 1910-1912, and later received his B.S. degree in geology from the University of Chicago. In the summer of 1916 he joined the geological staff of the Empire Gas & Fuel Co. in North Texas. He remained with that company until 1919 when he became chief geologist for Atlantic, a position he held until his death. For several years he was president of the Dallas Petroleum Geologists and was a member of the A.A.P.G. since 1919.

Company and location—	Daily capacity	Av. daily runs July	Av. daily runs June
Texas Co., San Antonio	3,000	3,000	3,000
Valley Ref. Co., Huntington	1,000	60	60
Total	29,100	18,760	18,860

*Shut down.

WEST TEXAS AND PANHANDLE

Company and location—	Daily capacity	Av. daily runs July	Av. daily runs June
Active Oil Co., Arno	1,500	(*)	(*)
Aero Ref. Co., Pecos	200	100	100
Coitex Ref. Co., Colorado	12,500	8,000	8,000
Concho Ref. Co., San Angelo	250	100	100
Cosden Oil Co., Big Spring	12,000	12,000	8,500
Danciger Refs., Inc., Pampa	6,500	5,000	4,500
Gibson Oil Corp., Magic City	250	150	100
Gulf Ref. Co., Sweetwater	7,500	4,500	4,500
Hill Ref. Co., Ballinger	100	(*)	(*)
Howard County Ref. Co., Big Spring	1,500	600	600
McNutt Ref. Co., El Paso	2,000	750	750
Moutray Oil Co., Hawley	1,200	990	980
Muenster Ref., Abilene	300	(*)	(*)
New Deal Ref. Co., Abilene	300	(*)	(*)
Nolting Ref. Co., Sweetwater	1,000	(*)	(*)
Onyx Refining Corp., Hawley	1,200	1,000	1,000
Panhandle Ref. Co., Kings Mill	2,000	1,600	1,600
Paramount Pet. Co., San Angelo	2,000	(*)	(*)
Phillips Pet. Co., Borger	50,000	20,160	20,000
Shamrock Oil & Gas Corp., Sunray	2,500	2,500	1,500
Shamrock Oil & Gas Corp., Meldavis	1,600	1,400	1,500
Sinclair Ref. Co., El Paso	4,000	(*)	(*)
Southtex Ref. Co., Trent	250	(*)	(*)
Standard Oil Co. of Texas, El Paso	14,000	5,300	6,100
Starlight Ref. Co., Ballinger	500	(*)	(*)
Texas Co., El Paso	2,000	1,000	1,000
Texas Co., Amarillo	4,000	3,000	3,000
West Texas Ref. Co., Pecos City	6,000	(*)	(*)
Western Ref. Co., Mertzon	100	(*)	(*)
Western Ref. Co., Baldridge	1,000	(*)	(*)
Wickett Pet. Co., Wickett	2,500	600	600
Total	140,770	68,750	64,430

*Shut down.

Louisiana's New Conservation Law Seen as Improvement

BATON ROUGE, La., July 6.—Louisiana's new conservation law, having passed both the house and senate, now awaits only the signature of Governor Leche before becoming effective. While representatives of oil and gas interests in the state did not secure all of the changes they wanted and will be forced to accept some rules that they did not want, the new law on the whole is better than had been expected by many when the legislature convened in May. Other bills applying new taxes to natural gas have also been passed.

The only important change adopted during the senate hearing and now a part of the final bill provides for the well's productivity by bottom-hole pressure tests when desirable. The bill as amended by the senate committee also struck out the provision for placing allowables upon a flat per well or acreage basis. This will change the present method of determining allowables in Rodessa. The main features of the new law will be the same as reported in the June 25 (page 31) issue of The Oil and Gas Journal.

The following provision was inserted, replacing part of section 3:

"Such allowable shall afford to the producer of each property in a common source of supply the opportunity to produce his just and equitable share of the oil and gas, so far as can be practically obtained without waste, and for this purpose to use his just and equitable share of the reservoir energy. The Commissioner of Conservation is authorized to ascertain the productivity of all property in a common source of supply for the purpose of fixing the allowable production as hereinabove provided, and in so doing shall give due consideration to the productivity of the wells located thereon, as determined by open-flow tests, bottom-hole pressure tests, or any other practical method of testing wells, as well as surface acreage included in such common source of supply, and such other factors as may be pertinent thereto."

House Bill 284, providing 1 per cent on natural gas sales, was amended in the senate to exempt sales for industrial or manufacturing purposes. The original bill called for 5 per cent, but it was reduced in the house. The proceeds from this tax are to be pooled with the luxury tax for financing the social security program.

Bill 286 reduces the tax on gross receipts of gas pipe lines from 2 to 1 per cent.

Bill 285 was amended to reduce gas severance tax from the proposed two-fifths cent per thousand to three-tenths cent.

Oil News from Foreign Lands

Columbian Starts Drilling

Colombian Petroleum Co., now owned 79 per cent by the Texas Corp. and Socony-Vacuum Corp., has started drilling operations on its No. 11 La Petroleo in the Barco concession of Colombia. Control of the Colombian Petroleum Co. was acquired by the Texas Corp. and Socony-Vacuum recently by purchase of 100 per cent of the stock in South American Gulf Oil Corp.

COLOMBIA

The Colombian company's No. 11 La Petroleo, in a part of the Barco concession previously proven productive at depths ranging from 600 to 1,300 feet, is drilling at approximately 575 feet. On the south dome of the Barco concession, Colombian is drilling at about 1,800 feet in the No. 3 Rio de Oro, which is approximately three-quarters of a mile west of the No. 2 Rio de Oro recently ordered abandoned. Crews of the Colombian company are now attempting to recover drill pipe lost in the No. 2 Rio de Oro after drilling to below 6,300 feet, where salt water was tested. Three other tests in the La Petroleo portion of the Barco are rigged up, but actual drilling has been delayed temporarily.

Rigging for Fourth Test

Standard Oil of Venezuela, subsidiary of the Standard of New Jersey, is rigging up for its fourth drilling operation in the Podernales district of eastern Venezuela. The test is No. 1 Cottera, in the same general area where the company has completed two wells each capable of about 800 bbls. a day. The Standard of Venezuela No. 3 Amacuro is now drilling at 2,200 feet. The No. 1 and No. 2 Amacuro producers were completed at depths ranging from 4,500 to 5,000 feet.

VENEZUELA

Enactment of the Public Order act by the Venezuela legislature, giving the government authority to cope with political and labor agitators, has been followed by resumption of normal oil-producing and development operations in most of that country's fields. The new law enables the government to suppress and deport those guilty of inciting labor and political revolt and provides for settlement through constituted channels of disputes between employers and employees. Prior to enactment of the law, companies operating in the Lake Maracaibo district and later in the eastern Venezuela territory were harassed by frequent labor disturbances. The unrest was largely political and in most cases generated by agitators previously deported by President Gomez. On the death of Gomez, who had established a strong dictatorship, many of the radical agitators flocked back to Venezuela and under the new administration's attempt to liberalize government were given unrestricted freedom of speech and action.

Watching Japanese Operations

California petroleum interests are watching operations of the Japanese government in developing a new oil region in Java, Sumatra and Borneo. While oil possibilities have been discovered, it is declared nothing has been found to justify hope of any great exploitation. In Borneo two companies are said to have been producing a total average of 13,640 bbls. daily during the past year. The present effort is understood to be sponsored by the ministers of Japan's army, navy, foreign affairs and colonies. The combine has been formed by Mitsui, Mitsubishi and Sumitomo interests to operate under the new fuel policy of the Japanese government. It is capitalized at 50,000,000 yen, or approximately $15,000,000. Preliminary expenditures of 1,000,000 yen have been authorized.

JAPAN

The first concrete step in the Japanese control of the crude oil sources already discovered and in operation calls for consolidation of the Mitsui Trading Co. and Borneo Oil Co., which would become Japanese controlled. The former has marketing experience and the latter engineering surveys that would become the basis not only of future efforts for finding new fields, but of the disposition of any and all production that might exceed Japan's own needs.

It is understood that the Japanese government and foreign marketing companies operating in that country have reached an agreement in regard to the storage program which has been a matter under dispute over the past two years. Under regulations announced in 1934 the government asked all oil marketing companies to carry six months' supplies on hand at all times in addition to working requirements. Oil companies have refused to comply with the request, contending that the cost would be prohibitive. A new plan has been worked out which will reduce the cost to the companies.

Standard-Vacuum, Shell and Anglo-Iranian subsidiaries are the principal distributors followed by the Japanese owned companies.

Oil Exports from Russia

Oil exports from Russia in February, 1936, amounted to 1,950,809 bbls., compared with 1,702,967 bbls. in February, 1935, an increase of approximately 14.6 per cent according to official Soviet Oil Trust statistics. However, exports for the first two months of 1936 were lower than for the corresponding period of 1935, amounting to 3,696,343 bbls., and 3,795,351 bbls., respectively. The largest exports were to France, Great Britain and Germany in the order named. Shipments by products for the month of February, 1936, and February, 1935, in approximate barrels, are as follows:

U.S.S.R.

	February 1936	February 1935
Gasoline	414,022	448,098
Kerosene	227,332	164,045
Lubricating oil	134,022	70,763
Fuel and gas oils	166,398	144,449
Crude oil	56	250
Asphalt (tons)	.....	76
Paraffin wax (tons)	1,223	1,059
Miscellaneous	2,030	692
Total (bbls.)	1,950,809	1,702,967

The largest exports were to France, Great Britain and Germany in the order named.

To aid in expanding oil field and refinery operations in the U.S.S.R. the Soviet oil administration is spending several million dollars with American manufacturers. Some of the purchases have already been made and others will be closed later in the year. Additional expenditures have been authorized with European concerns.

M. Barinoff, chief commissioner of the oil administration, has been inspecting oil equipment in the United States as have a number of Russian engineers. The purpose of these visits was to determine the equipment most suited to oil operations in the U.S.S.R. They are particularly interested in drilling equipment for deep tests which have become a necessity in order to find new oil reserves. In the refining end, the Russians plan to install large cracking units which will have much larger capacity than existing units.

TEXAS OFFICIALS OF FAR EAST MARKETING COMPANY

—Photograph by Bachrach.

H. M. HERRON

J. V. MURRAY

H. M. Herron, general manager of the export department of the Texas Corp., has been elected president of the California-Texas Oil Co., Ltd., newly organized unit of the Standard Oil Co. of California and the Texas Corp., which will market petroleum products in the Far East. Mr. Herron, a native of Olean, N. Y., has been with the Texas Co. since 1910, serving in various capacities in the refining, marine and export departments. J. V. Murray, of the Texas Corp., is a director of the new company and William Hunstadter is secretary and treasurer. Max Thornburg and R. H. Morrison, representing the Standard Oil Co. of California, have been elected vice presidents of the marketing company. (Pictures appeared in the July 2 issue, page 15.)

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The Whole Picture

A domestic industry centering its attention on state allowables and 10 per cent gains in demand may be missing something vital to its welfare.

Many operators feel that strikes in French refineries and South American fields, an enlarged petrol demand in the United Kingdom, a new field in Arabia, are remote happenings of concern only to their foreign brethren.

This narrow view of the isolationist always was wrong in the oil business—never more so than now.

Petroleum products are sold everywhere and whatever affects either supply or demand, no matter how little, has reactions in a world market. Last year export prices in this country stiffened as Italy bought oil supplies for hostilities with Ethiopia. Actually, most of this business was placed in another country but in the inevitable shuffling of world supplies markets strengthened here and elsewhere.

This experience, of minor importance, indicates the possibilities in a general embroilment or an internal uprising in a major country.

A Far East situation is of immediate importance. Japan has been a large buyer of California crude and finished products. The U. S. S. R. also has been making cargo purchases of gasoline for delivery to Siberia, thereby releasing supplies at its Caspian Sea refineries providing more exports to nearby European markets.

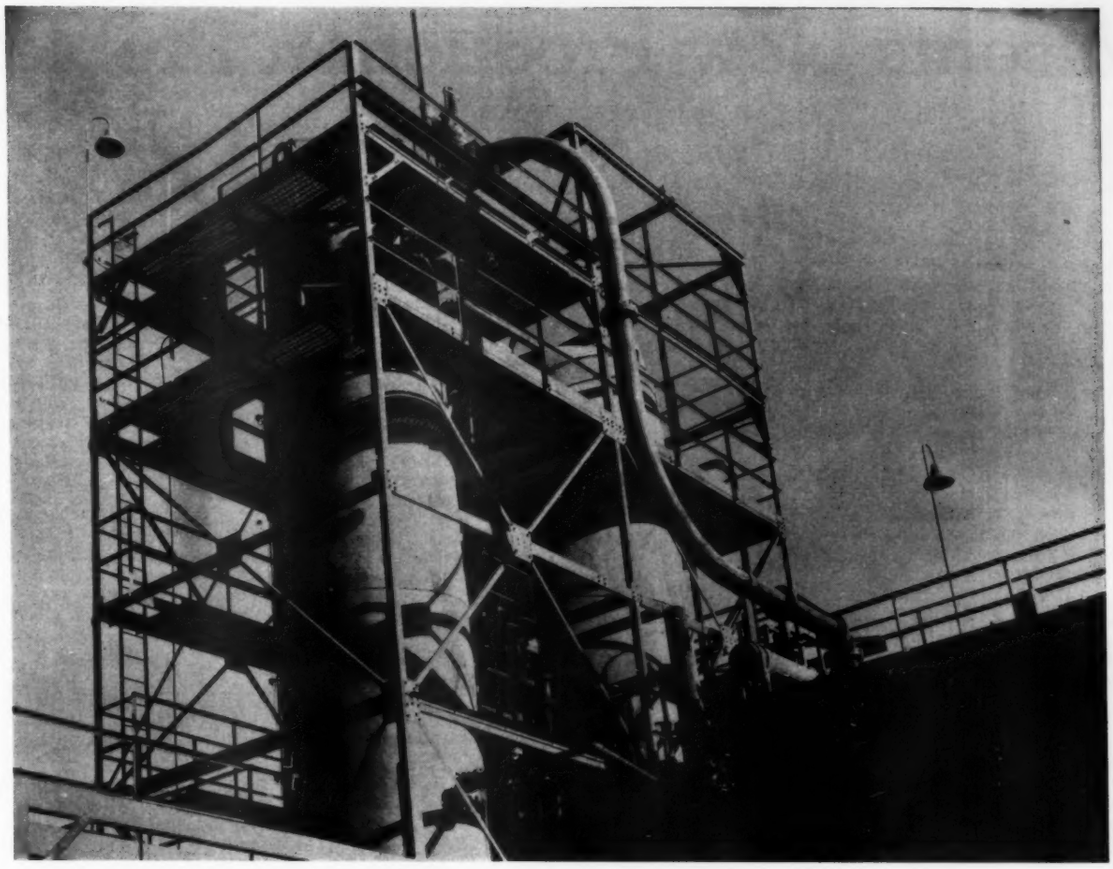
These greater export shipments across the Pacific explain why the enlarged surpluses from California's operations have not come through the Panama Canal to disturb the balance of eastern domestic distribution. This is not necessarily a permanent situation. New oil reserves are being found in those sections of the world which look to the Far East for outlets. California refiners may yet have to find new markets.

Backed with new geological data the drill is to be taken to the remotest parts of the world. Modern transportation facilities will make new oil supplies available wherever found.

This country has a more direct interest in foreign developments. Exports of crude and petroleum products, not as large as they were at one time, now average better than 300,000 barrels daily, a 13 per cent gain over last year and 10 per cent of its market. Including bonded materials, imports are half the exports.

Foreign production and refinery output are increasing this year. Demand is keeping pace. Any shifts in these outside conditions are certain to have immediate bearing on markets within this country.

The oil man who does not look beyond the borders of the United States is missing 40 per cent of the complete picture.



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■ Incorporated in the design of these units is the experience of large scale commercial operation, and research and experimental work conducted by various refining organizations.

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Mansion Area in Oklahoma City Field Presents New Production Problems

By S. F. SHAW
Consulting Engineer, Oklahoma City, Okla.

There is general absence of knowledge as to what can be expected in the way of performance of gas-lift in deep wells. We are accustomed to seeing wells flow naturally from the greatest depths so far reached, but many operators seem to be in doubt as to whether gas-lift can perform at these depths.

Wells can be produced artificially by gas-lift with great dependability. They conform to the same conditions as wells flowing naturally. The same factors as regards efficiency, quantity of fluid lifted, sizes of pipe, quantity of gas required, etc., apply alike to wells flowing naturally and to gas-lift wells. In fact, wells flowing naturally are gas-lift wells in which the gas is supplied by the reservoir instead of being supplied by a compressor plant.

However, the principles that apply alike to wells flowing naturally and artificial gas-lift wells are not well understood, notwithstanding statements to the contrary. If this statement does not sound convincing, the reader might ask several production engineers the capacity of a pipe of given diameter, and the quantity of gas required, to lift a barrel of oil, under conditions which have not been previously covered, and observe the differences of opinion in the answers.

Formulas as to the thermodynamics involved in the compression and expansion of gas are available, but exact formulas applying to gas-lift principles are nonexistent. All advance in the understanding so far gained in gas-lift operation has been by observation while experimenting and operating, and by applying the data so obtained as a guide for handling new conditions.

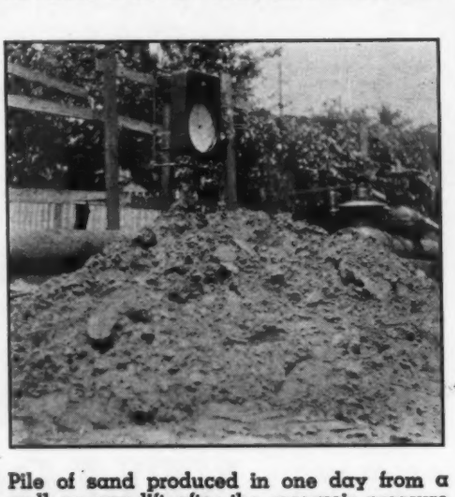
Much confusion exists as to what can, and what cannot, be done with the gas-lift. As an illustration, statements have been made in published articles to the effect that continuous gas-lift in the Oklahoma City field becomes inoperative when the reservoir pressure declines to 300 pounds, and yet tests have been carried out over long periods of time, showing that continuous gas-lift in this field can be carried down to a flowing pressure of 60 pounds, or reservoir pressure of 70 pounds, and still obtain a production of 550 bbls. per day. Extrapolation of performance curves covering actual operations ranging from 600 pounds down to 60 pounds, indicates that gas-lift can operate in this field at 20 pounds, and still lift 100 bbls. per day under proper conditions. Even better performance can be obtained than that just mentioned if conditions are so adjusted as to make this practicable.

It is pertinent to ask what the conditions are that supposedly prevent gas-lift from being operative at 300 pounds, and that make it practicable at 20 pounds. To cover this point in a general way, it may be well to re-state the principal factors that have a bearing on operation of the gas-lift. These factors are as follows:

1. Length, diameter, and character of the surface, of the flow string.
2. Pressure at the lower end, and at the upper end, of the flow string.
3. Quantity, character, and physical condition of the fluid being lifted.
4. Quantity and character of the gas used as the lifting medium.

Influence of Pipe Sizes

When pumping a liquid or a gas through a pipe on the surface, it is common knowledge that the length and diameter of the pipe employed enters into the calculations of capacity to an important degree. Friction loss in a vertical string employed for gas-lift is an even more important consideration than friction loss in a pipe for handling fluid on the surface, owing to the fact that the gas is rapidly expanding as it rises toward the upper end of the flow string, thereby increasing greatly the velocity of the moving column. The roughness of the surface in the flow string has a marked bearing on the friction loss. When the flow is through an annulus, the character of the couplings on the inner string has a surprising influence on the capacity of the annulus, and on the quantity of gas required for lifting the fluid.



Pile of sand produced in one day from a well on gas lift after the reservoir pressure had declined to 125 pounds

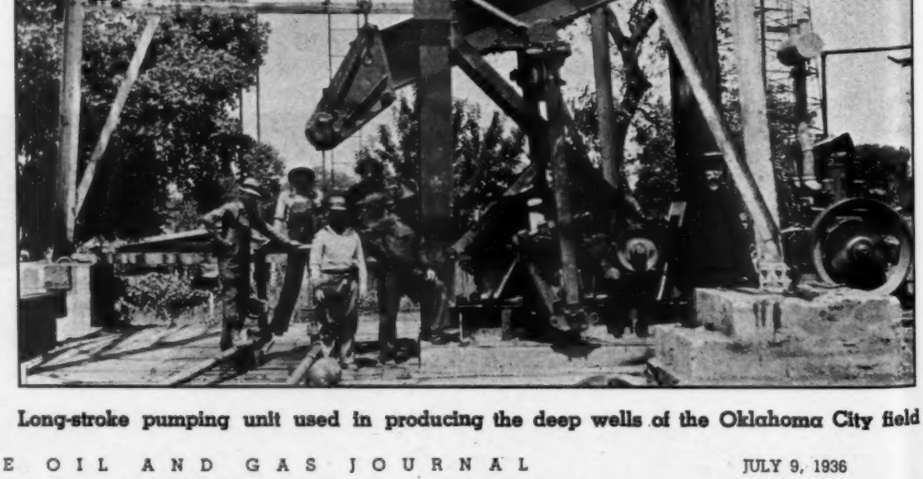
Other conditions being equal, a short length of flow string has a greater capacity than a long string. Also, a pipe of large diameter has a greater capacity than one of small diameter. It then follows that in wells of great depth with low flowing pressure, large capacity on gas-lift can be obtained only by completing the well with a casing of large diameter. If the flow into the well is slow, whatever be the reason for such, the conditions as to production may be better satisfied with a pipe of smaller diameter than if the flow into the well is large. In other words, in a sand with very low permeability, even though the reservoir pressure might be comparatively high, the flow into the well might be low, therefore, there would not be the need for a pipe having as great a capacity as if the permeability were high, and the flow into the well were large.

The efficiency obtainable in a pipe of large diameter is greater than in one of small diameter, other conditions remaining the same. That is, the number of cubic feet required to lift a barrel of oil is less in a large pipe than in a small pipe, if conditions as to flowing pressure, character of liquid, etc., remain the same. This point is clearly illustrated by performances in the Tonkawa and Seminole field at depth of 4,000 feet, and to an even greater extent in the Oklahoma City field at depth of 6,500 feet.

Influence of Pressure

The pressure obtaining in the lower end of the flow string is one of the most important factors entering into gas-lift operations. The higher the entrance pressure, the greater will be the capacity of the flow string, and the lower will be the quantity of gas required to lift a barrel of oil. Small pressures at the upper end may seem hardly noticeable, but high discharge pressures compared to entrance pressures greatly retard the flow. It is to be expected that the lifting efficiency of the energy in the gas is greatly reduced when an important percentage of the energy possessed by the gas is rendered unavailable for lifting liquid by reason of imposing high back pressures at the discharge end of the flow string. It may be difficult to realize that a back pressure of 100 pounds at the discharge when at sea level makes unavailable 50 per cent of the energy possessed by the gas under a pressure of 840 pounds at the entrance to the flow column.

The density, viscosity, and temperature of the



Long-stroke pumping unit used in producing the deep wells of the Oklahoma City field

liquid being lifted have a pronounced influence on the efficiency with which the liquid can be lifted, although sufficient data are unavailable to define the influence of these factors in a quantitive sense. In general, we may say that lower density, lower viscosity, and higher temperature promote efficiency in a gas-lift column.

The quantity, viscosity, and temperature of the gas employed as a lifting medium affects the efficiency to some extent, although by no means as greatly as do these same factors in connection with the liquid being lifted.

Flowing Factors

Wells of great depths require flow pipes of large diameter, particularly where pressures at some time are expected to be low. Under conditions of great depth and low pressures, large quantities of gas are required.

If the cost of compressing gas is high, then the lifting cost will be high in deep wells with low pressures. However, a study of gas-compression in oil fields indicates that gas can be compressed at low cost if the plant be properly designed for the purpose for which it is to be employed.

The use of gas-lift for producing oil is inextricably tied up with costs, just as in the use of every other artificial lifting method. If the lay-out is such that the cost of compression is excessive, then the production costs may become prohibitive; or if the lay-out be such that the gas energy is not applied in a manner that will obtain all of the oil that will enter the well, then the advisability as to the use of the method becomes questionable.

The oil fields are well supplied with examples that illustrate the improper use of gas-lift. It would appear as if the operator who does not have a clear understanding of the proper use of gas-lift, and who is unwilling to learn, is better off if he employs some old-fashioned method of lifting, however much he may suffer in comparison with his neighbor who adopts methods more advanced in understanding and in benefits.

In general, three broad principles may be said to apply to the successful use of gas-lift:

1. Quantity of production and costs of operation are dependent on having the proper pipe size for the quantity to be lifted.

2. Costs are directly dependent on having the compressor plant so designed that it can operate at high efficiency and at low cost per unit of gas compressed.

3. Efficient application of low-cost gas to the lifting operation in the proper size of flow pipe must be arranged in order to obtain the most satisfactory production at low operating cost.

There seems to be considerable misgiving on the part of many operators as to the capital cost for building a gas-lift plant. There is also misapprehension as to operating costs when producing by gas-lift. It is true that unwarranted expenditures in building a plant and inefficiency in application of the gas-lift may be very costly, but the same degree of mishandling of any method would also result in high costs.

The manner in which the gas-lift should be applied depends on the object to be achieved. If wells are completed when the price of oil is high, and when there is demand for all of the oil that can be produced, it is of advantage to the operator to produce the oil as rapidly as possible. In such a case, he would erect a gas-lift plant to handle the maximum requirements, and the investment would, perhaps, be high and might be in use for a comparatively short time, and the operator might be unable to salvage the equipment immediately, possibly never. An example, somewhat extreme, brings out the result of this procedure. A well came in for a small production on natural flow and swab, not to exceed 200 bbls. per day. At this time oil was selling at $2 per barrel and there was demand for all that the well could produce. A gas-lift plant was installed in about one week, costing approximately $30,000. The well responded with a production of 6,000 bbls. per day, yielding a revenue of about $12,000 per day. The plant was paid out in three days, and production continued at a declining rate for more than a year by this method, yielding more than 500,000 bbls. of oil. There is little question as to this being the proper procedure, whatever be the salvage value of the plant.

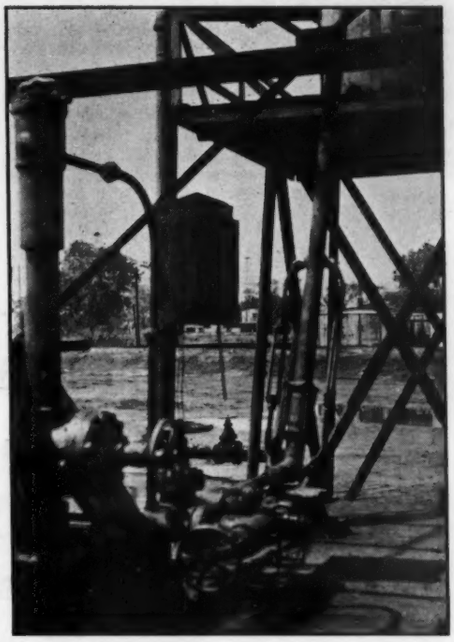
Conditions now are different. There is an excess of oil available over the demand, and in order to keep the price at a figure that will prevent bankruptcy, the production must be restricted. Under this condition it would be folly to build a plant with capacity sufficient to handle the maximum production that could be made on a property. Under such conditions, it is advisable to build a plant only of sufficient size to handle the allowable from the property, assuming that the capacity of the plant is sufficient to flow any one well at maximum capacity in order that proper potentials can be established.

The problem of individual well operations is a serious one under all conditions and in any field. Individual operations of single wells should be avoided so far as possible. The most economical set-up is that of having several wells, and equipping those wells with a plant so situated that it can handle each well for whatever time it is desired to produce it.

Gas-Lift in Oklahoma City Field

The production of a well of large capacity for a short time during the month is usually less expensive than handling it continuously through the month, provided the plant facilities can be diverted from one well to another. For instance, a plant in the Oklahoma City field should be able to produce at least one well at maximum capacity, in order that potentials can be established when required to do so. If, however, the allowable is only 10 per cent, it would then be theoretically possible to handle 10 wells with this single plant. Such a plant, if located where there must not be any considerable amount of noise, or vibration, and where new machinery is necessary, by reason of being close to residences in a thickly populated district, would cost about $70,000, and if apportioned among 10 wells would average about $7,000 per well. This plant would be able to handle such wells immediately after natural flow has ceased, or has become unsatisfactory.

Natural flow in a deep well might cease when production is as high as 10,000 bbls. per day, after which the gas-lift could continue to handle it throughout the life of the field. Based on the barrel of oil lifted, the capital expenditure would average about $7 per barrel of daily production if the well were capable of making 10,000 bbls. per day, or if the production were as low as 2,000 bbls. per day, the capital outlay would be on basis of $35 per barrel of daily production. With such a plant, the cost of compressing gas would probably be in the neighborhood of 1½ to 2 cents per thousand cubic feet for operating costs. When producing 10,000 bbls. per day through a large casing, the consumption of input gas would be in the neighborhood of 500 cubic feet per barrel, and the charge for gas-lifting would be about three-quarters to 1 cent per barrel of oil. When producing 2,000 bbls. per day, the input gas might average 2,500 cubic feet per barrel and the gas-lifting portion of the operating costs would be 3¾ to 5 cents per barrel.

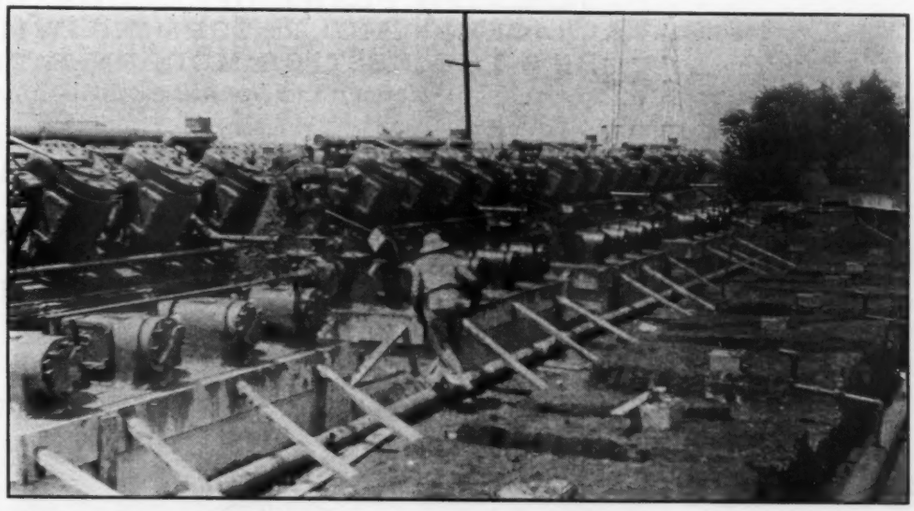


Four-inch plunger lift installed in Mansion area of the Oklahoma City field

Casing sizes have a marked influence on the type of gas-lift that must be employed, and on the cost of operation. For instance, in a well with 6⅝-inch to 7-inch casing, making a maximum of 200 bbls. per day, the consumption of gas would be from 10,000 to 15,000 cubic feet per barrel when on continuous gas-lift, and daily production would be greatly curtailed because of the limitations as to producing any satisfactory quantity of oil through a small casing. It has been found in these small casings that production can be increased and consumption of gas can be much reduced by employing some type of intermittent flow after production has declined to a few hundred barrels per day. Wells have been profitably carried to abandonment in the Oklahoma City field by using the proper type of intermittent flow through small casings.

If large casing be used, the production can be carried down to a very low bottom-hole flowing pressure on continuous gas-lift, and at very low lifting cost.

As a contrast with conditions in the Oklahoma City field, we might consider the East Texas field at a depth of 3,600 feet where the allowable pro-



Installing compression equipment on foundations in new plant being erected in Mansion area

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duction is now not much greater than 20 bbls. per well per day and where several small compressor plants, each costing about $8,500, have been built which are capable of handling from 10 to 25 wells from each plant. The capital outlay per well ranges from $850 to $340, or from $43 to $17 per barrel of oil lifted per day. Operating costs are largely for labor, which is required on the lease no matter what be the lifting method employed. Other expenses are for lubricating oil, maintenance, and sundry items. The operating cost for gas-lift under such conditions is a small item, as has been demonstrated by these small compressor plants now installed in the East Texas field.

As long as allowables are small, the plant would be small; when allowables are raised, as is inevitably the case at some time in the life of

Paraffin scraped from the tubing of a well in the Oklahoma City field

most fields, the operator is able to handle the larger production by expanding the size of the plant to handle the required amount of oil. Following this program, no serious changes are required in the well hook-up, in the method employed, or in the organization.

Mansion Area of Oklahoma City Field

About 30 good producers have been completed in the Mansion area of the Oklahoma City field, and others are being brought in almost daily. Within the coming 30 days there may, perhaps, be an additional 50 wells completed, with potentials ranging from 5,000 to 20,000 bbls. per day. For the most part, these wells are cased with pipe of 8⅝-inch, 9-inch or 9⅝-inch diameter, although a few wells have casing of 7-inch diameter.

Most of these wells have come in flowing naturally, although a few are already producing on gas-lift.

The reservoir pressure was about 575 pounds when the first large well was completed in this area, and it is now in the neighborhood of 400 to 450 pounds in the same section of the field. Most of these wells have been completed high on the structure where there is sufficient gas for natural flow.

A large number of wells in the older section of the Oklahoma City field were placed on gas-lift before the pressure had declined as low as now prevails in the Mansion area. It is reasonable to expect that with further decline in reservoir pressure in the Mansion area, due to increasing withdrawals of oil and gas, there will be a gradual increase in the number of wells operating on gas-lift.

Most of the wells completed in the Mansion area are of such capacity that no method other than gas-lift can be satisfactorily employed immediately after natural flow ceases. In this field the capacity of wells on gas-lift may drop to only about one-half that which obtains on natural flow before natural flow ceases, assuming that at the time of natural flow there is sufficient gas produced with the oil to flow the well at maximum capacity.

In practically all cases of gas-lift in the Oklahoma City field, the flow is through the annulus. The use of tubing results in a higher consumption of input gas per barrel of oil than when flowed through the casing, consequently costs are higher for tubing flow.

Probably most of the wells will go from natural flow to gas-lift. During the next potential in September, possibly the pressure will have declined to the point where the gas-lift-Reda pump combination method can be employed to advantage in setting up potentials. At present, there is probably too much gas present with the oil to permit the gas-lift-Reda pump combination method to operate satisfactorily.

Operators who have installed a gas-lift plant, and whose wells are completed with large casing, may remove the Reda pump after taking the potential and flow the wells on continuous gas-lift, thus removing the hazard of a Reda pump suspended in the well, and also reduce the operating expense by the amount of the bill for electric power.

If the operator purchases gas at 8 cents per thousand cubic feet for lifting his oil, and if he has employed the gas-lift-Reda pump method for establishing potentials, he could remove the packer and lift the allowable by straight Reda pump to the surface at lower operating cost than by employing gas-lift.

The gas lift-Reda pump combination method consumes from 0.5 to 1.0 k.w.h. per barrel lifted. This costs about 3 cents per k.w.h., including current consumed and the demand charge. Therefore, the cost for power in the combination method is about 1½ to 3 cents per barrel. Also about 1,000 to 2,000 cubic feet of gas per barrel is required, and at 8 cents per thousand cubic feet would be 8 to 16 cents per barrel, or a total of 9½ to 19 cents per barrel for gas and for electric power.

If the well is completed with a large casing, when the reservoir pressure is about 250 pounds, the consumption of gas on continuous gas-lift is about 1,600 cubic feet per barrel and the operating cost of 2 cents per thousand cubic feet for compressing the gas would make for a lifting cost of 3.2 cents per barrel.

When wells completed with casing of 6⅝-inch or 7-inch diameter in the Mansion area have declined to 500 bbls. or less per day, perhaps some form of intermittent flow can be employed, thus increasing production and reducing the quantity of input gas required.

Along the west edge, after water encroachment has become serious, the wells can be plugged back, thus reducing or eliminating the amount of water to be lifted. The flow into the well will become reduced, but the reservoir pressure will remain unchanged by this procedure. Under this condition, the plunger lift with 3-inch or 4-inch tubing might be employed successfully.

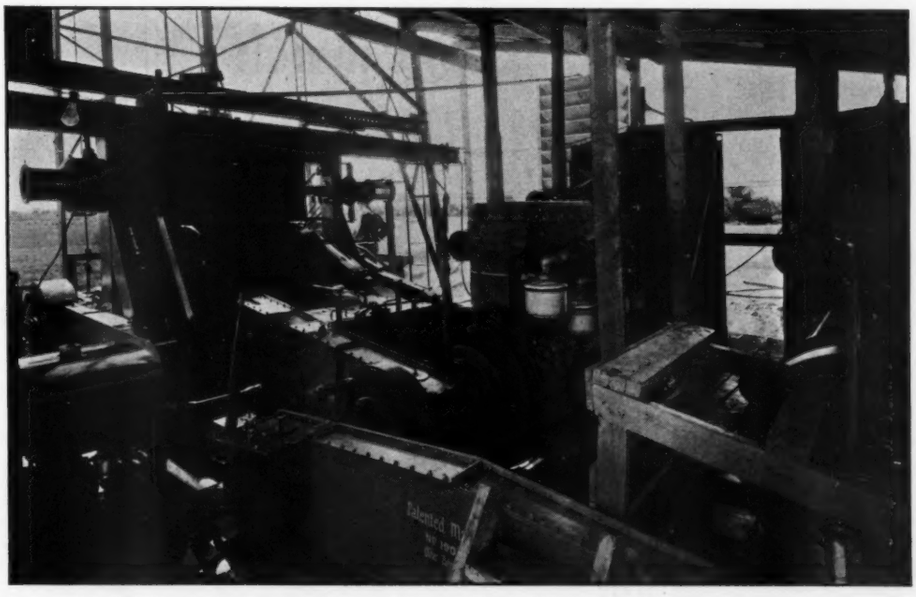
Wells completed with large casing can probably be carried to abandonment by straight gas-lift, at a reasonable cost. If at any time large capacity is required, the gas-lift-Reda pump combination method can be employed. However, when the bottom-hole pressure has declined to a low point, it is a question, as yet, whether the Reda pump can pick up the load on the combination method.

Paraffin troubles will probably enter the picture when the pressures in the Mansion area have declined to about 250 pounds per square inch. In the older part of the Wilcox zone, paraffin troubles have been combatted successfully, although there has been an increased cost for doing this.

Undoubtedly several wells in the Mansion area will be equipped with beam pumps when the production has declined to the point where the pump can handle the production. Several of the operators in this area have wells in the older part of the field equipped with sucker-rod pumping outfits, and by the time the wells in the new area have declined to a low production, equipment may be available from older wells being abandoned.

Practically all types of equipment have been employed, including long stroke, short stroke, standard pumping outfits, horizontal and vertical engines of low speed, medium speed and high speed. Some of the long-stroke pumping outfits have given surprisingly good account of themselves when considering the great depth and severe conditions imposed.

UNUSUAL DRILLING RIG USED IN CRESCENT POOL



J. E. Mabee & Co., drilling contractors, are using the equipment shown in the accompanying photograph for drilling in Logan County, Oklahoma, on Stanolind Oil Co.'s E. J. Terhume lease near the town of Lovell. The power for the rig is furnished by two 350-horsepower, six-cylinder engines. They are built to operate on natural gas, gasoline or butane. Natural gas is being used at present. The method of installation allows the two engines to be compounded for greater speed in pulling the drill pipe. In actual drilling the front engine drives the rotary table while the rear one drives the mud pump. At present only one pump is in use, but for the deeper drilling two will be used. A small multicylinder engine is being used to drive a 5-kilowatt generator for lighting and also operates an air compressor and water pump.

On June 29, the well being drilled with this equipment had reached a depth of 4,100 feet, a 122-foot steel derrick being used.

This rig was exhibited at the International Petroleum Exposition in Tulsa in May. It is one of the two largest mechanical drilling rigs ever manufactured.

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Oil and Bituminous Highways Constructed at Low Cost

The highway department of Virginia, an analysis made by the Western Petroleum Refiners Association reveals, returns annual dividends to the motorists and taxpayers of the state totaling $33,500,000 through its low-cost road construction program.

The huge dividends, in the form of savings in taxes and car operating expenses, amounts to $13.40 for each resident of the state and $88.16 for each registered car in the state. They were made possible by constructing 5,000 miles of low-cost oil and bituminous highway surfaces rather than limiting the improved road mileage and plunging the state heavily into debt in an effort to construct high-cost type roads at $25,000 a mile on routes where the traffic fell far short of justifying such an outlay.

"If we had surfaced the 5,000 miles of oil and bituminous roads with the hard, high-cost type surfaces," says a report of the highway commission, "the cost would have been $125,000,000. The cost of the bituminous roads has been about $2,500 a mile or a total of $12,500,000.

"The saving in construction cost has been $112,500,000 and the annual interest on that amount at 4 per cent is $4,500,000. The maintenance of the bituminous roads is about $1,000,000 more annually than it would be on the high-cost type leaving a net saving on maintenance and construction costs of $3,500,000 annually.

"Only about one-tenth the mileage of improved roads could have been provided using the high-cost type surfaces and we would have had only about 4,000 miles of surfaced roads in the state. Our construction policy has given the motorist 8,500 miles of smooth, well surfaced roads that can be traveled in comfort without the mud and dust menace 365 days in the year. Winter damage has been serious only once or twice in 14 years and has been repaired at no great cost."

The method used in Virginia is known as "stage construction"—increasing the thickness and durability of the pavement as traffic demands by successive applications of bituminous materials. It gives the maximum road service to the largest number of people with the funds available.

The Virginia commission estimates 1,000,000,000 vehicle miles are traveled on the oil and bituminous surfaces each year. Using the Bureau of Public Roads estimate that a car driven over a smooth, surfaced road can be operated at 3 cents a mile less than on a muddy, rutty and dusty road, the commission reports a saving of $30,000,000 annually in car operating expense. Thus the total savings to Virginia motorists and taxpayers in highway construction and maintenance costs and in car operating expense is $33,500,000 annually.

The commission has provided a surfaced road into every incorporated town and county seat; every city in the state is directly connected with every other city. Tourists are given easy access to the rich scenic and historical sections. Another benefit not mentioned in the commission's report, the Western Petroleum Refiners Association points out, is the great increase in agricultural land values that comes with increased mileage of surfaced roads. Agricultural authorities report that the value of the average farm located on a surfaced road is $21 an acre greater than the same farm located on a dirt road.

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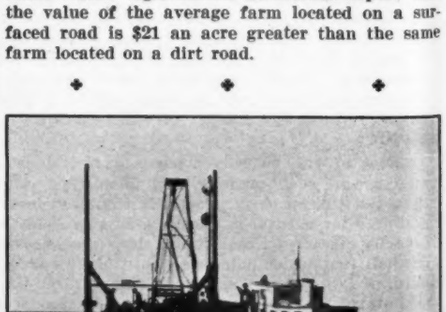


Rear view of Salt Dome Oil Co. and California Oil Co.'s drilling barge being towed in Galveston Bay

The Modern Cracking Process

By
GUSTAV EGLOFF
and
EDWIN F. NELSON
Research Laboratories, Universal Oil Products Co.

Properties of materials for cracking-plant service and the economic significance of cracking are discussed in this final installment of an article read before the World Power Conference, London. The other installments appeared June 23 and 30.

Owing to the high temperatures and pressures to which materials are subjected in a cracking operation, together with the corrosive nature of some charging stocks, special consideration has to be given to the materials that enter into the construction of this type of equipment.

Briefly, the materials conform to the following general description:

Ceramics

The service requirements in cracking heaters has greatly contributed to better refractories and development of special refractories. The early shell stills operated under cracking conditions for about two days and then the fires were cut. To increase the efficiency of the cycle it was necessary to cool the heaters and bring them up to operating temperatures very quickly. This imposed high strains on the refractories and tended to make them spall.

To eliminate the strains and consequent spalling, the ceramic industry has developed a medium-priced nonspalling brick. This material was primarily in demand for the oil refinery heaters, but now due to the cheapness of the product it has found other applications in heat-treating furnaces, hot-air stoves, and blast furnaces. Another problem confronting the ceramic engineers was the production of refractories true in shape and size, since matched brickwork is important especially around heating tube ends. Refiners, as a general rule, produce some low value heavy liquids and semiliquid residues which they burn as fuel. Many of these residues are of a corrosive and erosive nature—such as acid sludge oil from lubricating oil refining. The strain is often much more severe than that encountered from slag in coal-fired heaters. In order to withstand this corrosion, the slag-resistant refractories had to be improved for all refining use, and better refractories of this type are now available.

Refractories used in "cracking furnaces" have the properties shown in Table 8.

TABLE 8—PROPERTIES OF REFRACTORIES USED IN CRACKING FURNACES

	Super-refractories	First quality	Second quality
Pyrometric cone equivalent ..	33-34	31-32.5	28-30
Alumina content, per cent ...	42-46	38-40	.....
Basic oxides, per cent	3-3.5	4-4.5	.....
Shrinkage or expansion, per cent at 1,600° C.	1.5	1.0	.....
Compression on load, per cent at 25 lbs./sq. in. for 4½ hrs.	2-4	4-6	6-7
Loss on spalling: American Refractories Institute spalling test after two cycles, per cent (not more than)	5	15	.....

Oil refining heaters require accurate control of combustion conditions and furnace temperature. To obtain this control the fuel is usually burned in burner blocks or firing tunnels, which, being in the zone of combustion, must withstand continuously higher temperatures than encountered in most industrial heaters, with the possible exception of powdered fuel-fired boilers. In addition to being able to withstand high temperatures, the refractories around the boilers of a petroleum still have to withstand the quick cooling normally employed when the run is terminated and ceramics are now available for this service.

In practically all oil-distillation operations corrosion is encountered—particularly in oil-cracking installations. From our present knowledge of the subject, hydrogen sulfide is the chief cause of corrosion in these operations—hence corrosion in cracking units is accelerated due to the decomposition of the sulfur compounds in cracking stocks due to the high temperatures employed. However, the extent of corrosion is not always a direct function of the sulfur content of the oil but is dependent upon the molecular structure of the sulfur compounds and their decomposition.

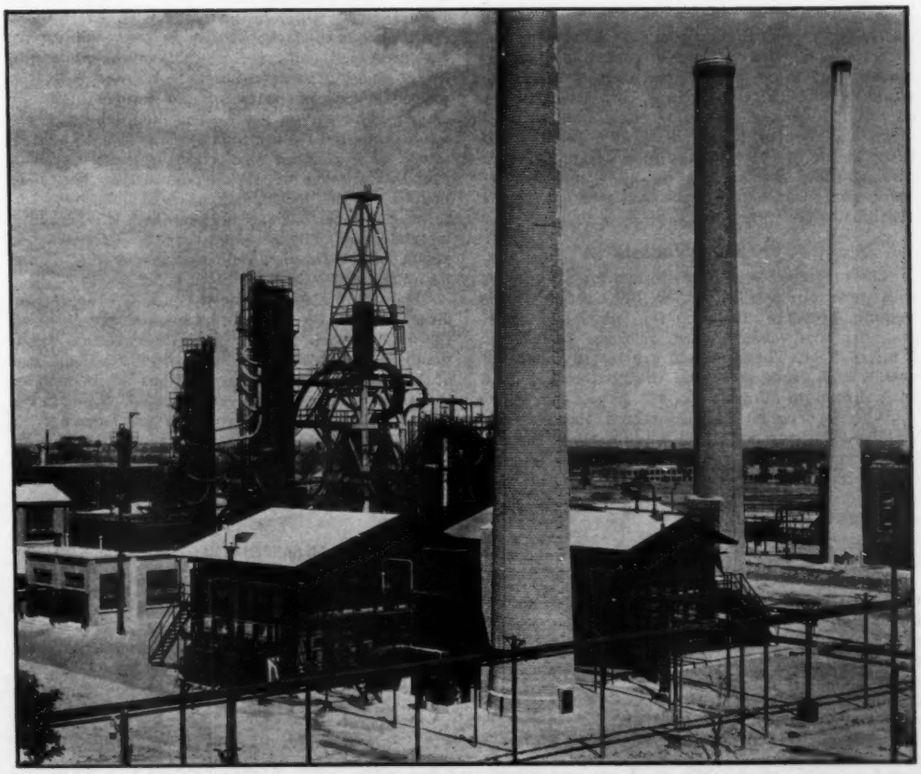
The highest temperature conditions in a cracking unit prevail in the heating tubes, and the corrosion rate is higher as a consequence. However, one cannot generalize from the data available as to the rate of corrosion in the various sections of a bank of mild steel cracking tubes. It has been found that maximum corrosion may take place in the bank of tubes at the point of (1) maximum temperatures in the tube bank; (2) between the lowest and highest temperature; and (3) at the lowest temperature.

As an illustration, a Kansas topped crude containing 0.28 per cent sulfur showed a maximum tube bank corrosion in the upper third (910° F.), less in the center (795° F.), and minimum in the lower (740° F.). When processing a Healdton topped crude containing 0.9 per cent sulfur, the maximum corrosion took place in the center of the tube bank (805° F.), with minima at the lower (750° F.) and upper (910° F.). An East Texas topped crude containing 0.25 per cent sulfur showed a minimum corrosion in the hottest portion of the tube bank (923° F.), and minimum in the coolest portion (790° F.). When processing a Lost Soldier topped crude, the corrosion rate in the top third of the tube bank at maximum temperature of 935° F. was one-fourth that of the rest of the tube bank. However, when processing a West Kentucky topped crude containing 0.8 per cent sulfur, the least corrosion took place in the upper third of the tube bank (915° F.) and the maximum at the lowest temperature of 775° F.

The method of determining the corrosion rate of heating tubes was determined by the length of time they remained in service before replacement was found to be necessary.

The data covering the results obtained in 10 cracking units converting sulfur-containing oils of 0.18 to 0.90 per cent to motor fuels is shown in Table 9. The furnace was a convection type and all tubes were carbon steel.

Alloy steels have largely replaced carbon steel tubes in modern pipe stills, as well as in pipe connections to vessels, primarily for the purpose of reducing corrosion. The choice of the alloy is large-



New 5,000-barrel crude oil topping and two-coil selective cracking unit to produce finished gasoline of high octane rating; the refinery being located in Canada

TABLE 9—CORROSION RATES OF HEATING TUBES USING DIFFERENT CRACKING STOCKS

	Lost Soldier topped crude	East Texas topped crude	Kansas topped crude	Pennsylvania fuel oil	Mid-Continent fuel oil	Oklahoma topped crude	Mid-Continent topped crude	Mid-Continent and East Texas topped crude	West Kentucky fuel oil	Healdton topped crude
A.P.I. gravity	28.0	24.0	26.3	38.0	25.0	27.0	26.0	27.0	26.9	25.0
Sulfur, per cent	0.18	0.25	0.28	0.30	0.30	0.35	0.4	0.57	0.8	0.9
Months of service in:										
Tube bank										
(a) Lower row	12	11	48	15	18	6	18	12	18	30
(b) Center row	12	15	6	15	18	12	12	12	30	18
(c) Top row	48	18	3	10	22	12	15	24	42	30
Transfer line	48	32	8	36	..	12	24	..	36	30
Vapor line	48	16	12	36	..	24	18	18	24	6
Reflux line	24	24	6	36	18	24	24	18	12	24
Hot oil pump										
(a) Suction	18	24	..	36	16	24	9	6	10	12
(b) Discharge	12	24	..	36	12	24	..	10	10	12
Temperature, °F.:										
Tube bank										
(a) Inlet	780	790	740	790	785	760	725	760	775	750
(b) Center	835	830	795	825	837	803	775	808	822	805
(c) Outlet	935	923	910	903	940	900	885	905	915	910

ly one of economics, in balancing the cost of the more expensive alloy with less expensive steel. This involves balancing the initial cost of alloy tubes versus the replacement of steel tubes, the down-time of the unit in making the replacements, and the hazard due to failure of the steel tubes.

The properties and comparative costs of steel and alloy tubes now commonly used in pressure pipe still construction are shown in Table 10.

Some refiners believe that relatively expensive alloys are not justified due to their cost and rely upon heavy wall steel tubes and careful inspection of the tubes from run to run to check the corrosion rate or weakness of the tubes. They have found it less expensive to use steel than alloy tubes. Other refiners will use only alloy tubes.

In addition to the use of alloys to prevent corrosion and also oxidation due to furnace combustion of the various types of tubes, they may be aluminum coated, inside and out, generally referred to as "calorizing."

In the late designs of cracking still furnaces, studies on the mechanism of the cracking reaction and the mechanics of the cracking plant set-up have indicated that it is extremely desirable to operate under high heat transfer rates. With the use of high heat transfer rates, the metal wall temperature of the tube is high, ranging to over 200° F. higher than the oil temperature. This necessitates the use of a material with high strength at high temperatures.

Alloys used for tubes have a lower heat conductivity in general than plain steel. The problem then is one whereby steels containing greater amounts of alloy materials are used to obtain strength at high temperatures, and with the use of the higher heat transfer rates and increased metal wall temperature, the effect is partly nullified. One of the problems of tube designers at the present time is to obtain an alloy having good conductivity and at the same time greater strength at high temperatures.

Pressure Vessels

The preferred practice is to manufacture heavy wall reaction vessels, either by electric fusion welding, properly annealing the vessel and radiographing the welded joints, or forge them from a large ingot. These vessels are usually made of special high-grade steel and the nozzles are lined with chromium alloys.

Where corrosion is encountered these vessels are lined entirely with a chromium alloy, the lining being installed by a special welding process, or the inner surface can be metal sprayed with aluminum or other corrosion-resisting metals. A ganister or cement lining is also used for protection to the vessel.

These vessels are usually constructed of high-grade steel by the electric fusion welding process and properly annealed. The important nozzles are usually lined with chromium alloy. The internal equipment, bubble trays, pans, etc., can be made of plate steel but preferably of cast iron, as the latter is more resistant to corrosion. For protecting the shell against corrosion a special chromium alloy steel lining can be used, or the surface metal sprayed with aluminum. A ganister lining can also be used.

Condensing, Cooling, and Heat Exchange Equipment

Admiralty metal tubes are commonly used where the cooling medium is water and the temperatures are not excessive. Where oil is the cooling or heating medium, seamless steel tubes are usually used excepting where corrosion is encountered, in which case chromium alloy tubes are used. The heads and channels of heat exchanger are usually constructed of forged or cast steel; the shell of steel with fusion welded joints. The heads of submerged water condenser sections are usually constructed of cast steel or of pearlitic cast iron.

Receivers, Separators, Etc.

These vessels are usually constructed of a high-grade steel by the electric fusion welding process. Added metal thickness suffices to take care of corrosion.

Pumping Equipment

Reciprocating pumps handling hot oil above 600° F. and at pressures over 400 pounds per square inch, should have their liquid end of forged steel. Outside plungers with extra deep stuffing boxes, jacketed for water cooling, are the preferred construction. The plungers should be of special steel, ground and treated to the proper degree of hardness and internally water cooled. The valves, seats, etc., should be of chromium alloy steel containing 12-14 per cent of chromium. For further protection against corrosion the liquid ends of these pumps can be made heavier or the blocks can be made of steel containing 4-6 per cent chromium and 0.5 per cent molybdenum. These pumps can be driven by a steam engine through reduction gears or they can be of the crank and flywheel type.

They can also be driven by a gas engine or diesel engine. Electric motors are not usually used for driving such pumps for the reason that these pumps are required to operate over a wide range of speeds for different conditions of operation. Pumps handling hot oil up to 800° F. at pressures not exceeding 200 pounds per square inch can be of the piston type with cast steel liquid ends having extra deep packing glands jacketed for water cooling.

Centrifugal pumps of special design, with cast steel or forged steel housings, alloy steel internal parts and driven either by electric motors or steam turbines, can be used to good advantage for handling hot oil at certain temperatures and pressures.

Other pumps, whether centrifugal or reciprocating type should be of rugged construction, carefully selected for the particular duty they are to perform.

Piping and Valves

The piping in the main part of the process is usually constructed of seamless steel tubing of the proper thickness with all joints flanged. Special alloy steel bolts are used for making the joints.

For mild corrosion conditions the walls of the piping are made heavier, but in cases where severe corrosion is encountered the piping can be constructed of seamless steel tubing containing 4-6 per cent chromium and 0.5 per cent molybdenum, or made of stabilized 18 per cent chromium, 8 per cent nickel alloy steel. Calorized seamless steel pipe is also used. All fittings should be of high grade cast steel, or where serious corrosion is encountered they should be of alloy steel.

All valves subjected to temperatures should be of high grade cast or forged steel, trimmed with alloy steel, containing 12-14 per cent of chromium.

Where excessive corrosion is encountered the body of the fittings and valves can be made of 4-6 per cent chromium and 0.5 per cent molybdenum or stabilized 18 per cent chromium, 8 per cent nickel alloy steel.

Insulation

It is important that piping and pressure vessels in cracking plant service be properly insulated and protected from the weather. In many cases it is advisable to construct the insulation so that it can be easily removed for inspection of the piping or the joints in the vessels.

For the higher temperatures such insulation as rock wool, lead slag wool, diatomaceous earth and a combination of firefelt and spongefelt are commonly used. On pipe lines this insulation can be mounted in a thin metal jacket, which is sprung apart when placing over the line and bolted together on the under side of the line, with edges overlapping so as to form weatherproof joints.

On vessels a monolithic insulation is largely used, which is constructed of rock wool, lead slag wool, or a mica base. This type of insulation is built up in layers into which a number of meshed wires are interspersed. The outer coating usually contains some portland cement and is then weatherproofed with an asphaltic compound. In some cases blankets of rock wool or lead slug wool or diatomaceous earth blocks are used, which are held in place by a wire mesh and then coated with a plastic insulation and weatherproofed with an asphalt.

In some cases it is desirable to insulate the liquid ends of hot oil pumps. In such cases any of the above mentioned insulations can be applied in a jacket

TABLE 10—ANALYSES CRACKING STILL TUBES

Type tube—	OH killed carbon steel	0.5% Moly carbon steel	Calorized Timken DM	4-6 Chrome	4-6 Chrome 0.5% moly	KA2S (18-8 stab.)
	Per cent					
Carbon	0.10–0.20	0.10–0.20	0.15 max.	0.15 max.	0.15 max.	0.07 max.
Chromium	... .	.....	1.00–1.50	4.0–6.0	4.0 –6.0	17.5 –19 5
Molybdenum	.....	0.45–0.65	0.40–0.60	.....	0.45–0.65	.....
Nickel	.....	.....	.....	.....	.....	8.0 –10.0
Silicon	0.25 max.	0.25 max.	0.50–1.00	0.50 max.	0.50 max.	0 75 max.
Manganese	0.30–0.60	0.30–0.60	0.30–0.60	0.50 max.	0.50 max.	0.50 max.
Phosphorus (max.)	0.04	0.04	0.02	0.03	0.03	0.025
Sulfur (max.)	0.045	0.045	0.03	0.03	0.03	0.025
Stress—	Creep strength, 0.01% in 1,000					
1,000° F.	2,700	10,700	15,000	6,500	7,000	15,000
1,100° F.	840	2,700	4,300	.....	.. ...	8,200
1,200° F.	290	480	1,950	.....	900	5,300
	Relation, ratio cost U.S.A. (January 1, 1936)					
Cost ratio	1.00	1.65	2.0	3.1	3.3	13.0

which fits over the liquid end of the pump, the jacket being so constructed that the top part can easily be removed for inspection.

For low temperature service 85 per cent magnesia covering is usually used. The thickness of insulation depends upon the temperature of the pipe lines or the vessels to be insulated, and the economics involved.

Control Instruments

In the early days of the cracking art when shell batch stills were operated for short-time periods, it was the practice to have the operator of each still manually control the temperatures, pressures and rates of flow to produce the desired quality of products. With the use of large capacity pipe stills operating continuously; with increased investment cost, there was economic justification for the installation of automatic control of the cracking unit to produce the desired quality of products.

The first step in the development of automatic controls was of the type known as the "off and on." These controls were, in most cases, inferior to manual control in that the automatic adjustments would result in over or under-controlling and produce the so-called hunting effect, as illustrated by the wavy lines on temperature, pressure and rates of flow charts. It has long been an operating rule that when an adjustment is to be made on a plant, the operator should only make one-half of what he believes to be the required adjustment at any one time, which rule made it possible to eliminate wide variation in operating conditions. The early "off and on" controls were entirely lacking in this function with a resulting erratic operation.

The demand for smooth control has resulted in studies and improvements on various factors which influence control of the operation. In order to obtain satisfactory operation over periods of months necessitated investigation into the use of special materials for the construction of control mechanism and valves where corrosion and erosion were factors, and brought about a wide usage of stainless steels and other alloys. The valve characteristics or the relation of the rate of flow to the travel of the stem on a valve, have brought out decided improvements in the characteristics of control valves. The lag in time between the change in the control point and the effect of the change in control medium have been studied and a number of devices worked out to make the time lag in the instrument and the control mechanism coincide. In addition to this, a number of studies have been made to improve the sensitivity and accuracy, as well as new applications of control instruments. This development has today been brought to a point where it is possible to obtain a far more uniform and smooth operation with automatic controls than is possible by manual control, which incidentally is the reverse of the situation obtained when automatic control instruments were first used.

A survey of the instrument and control equipment in use on the modern selective cracking process with an explanation of the duties of the various pieces of control equipment and the development necessary, will give a picture of the effect of the cracking process on the expansion of instruments and controls.

The measurement of the rates of flow of fluids was originally accomplished largely by the use of displacement meters. On high capacity units, this type of meter has been replaced with the differential pressure type, such as the venturi or orifice meter. Investigation of the viscosities, gravities and expansion of oil, has made it possible to use orifice meters with high accuracy. Recording orifice meters have been worked out with control equipment to obtain close control on rates of flow. This applies not only to the charge but to the control of rates of flow throughout the cracking plant. These rates of flow may be a function of temperature, pressure or liquid level.

Another important control point is the level in various pieces of equipment, as, for example, the bottom of the fractionating column, flash chamber, and the levels in the various receivers. These level control instruments must be such as to eliminate surges which would affect rates, temperature, and pressure on the balance of the system. The early controls were such as to maintain oil levels at one designated point. The latest controls are such that there is a considerable range over which the level is maintained and the change in level is such as to be gradual so as not to upset other operating conditions.

The accurate measurement of temperatures is extremely important. The use of two-metal thermocouples, using a potentiometer to measure the electrical potential produced by the temperature, was taken out of the laboratory and developed for commercial use on the cracking plant. The temperature recorders have been tied in with automatic controllers to maintain the desired temperature by regulation of pressure and rates of flow.

The general trend in the development of control instruments on cracking plants has been to tie together the duties of the various instruments used on the plant. Experience has indicated that the duty of any one controller is a function of the work done by other controllers and is closely associated with the lags on the other instruments. Bearing this in mind has made possible continued close control of the various operating factors in a cracking plant which is so desirable.

Automotive Industry

The trend of the age is toward greater speed of transportation whether it be in an automobile, airplane, train, or ship. As a means of increasing speed, the engine designer has found it desirable to increase the compression pressure under which the motors operate. This is not for the purpose of increased speeds only, but also increased efficiency. This may well be noted in Table 11 wherein the increased compression ratio of automotive engines is reflected. Ten years ago the average compression ratio was 4.55 where it now averages 6.15.

Each increase in compression ratio requires improved quality in the gasoline because of the knocking which would otherwise occur if low-quality octane fuel were used and consequent loss

TNEMETANK Nº 469 DEFIES "SOUR CRUDE"

Tanks in Reagan County, Texas, treated more than a year ago and in perfect condition today.

Added evidence, each succeeding month, makes it's record still more outstanding.

Science has at last developed a new kind of coating which positively protects storage tanks from all forms of corrosion. Thoroughly tested in the world's worst "sour crude" areas, TNEMETANK No. 469 has been proved 100% effective.

Truly amazing results have been obtained with this product. 2½ year ago one of our distributors applied TNEMETANK to more than 300 old tanks in West Texas "sour crude" areas, many of them riddled with small holes. TNEMETANK stopped all leaks and not one of these tanks has leaked since. During this same period a major oil company has had more than 100 tanks treated with TNEMETANK. Recent inspection showed all in perfect condition.

JUST PLACE YOUR ORDER

Our Authorized Appliers Do the Work and GUARANTEE It

The expert field service of our authorized appliers, operating factory trained crews, renders it merely necessary for you to give your order —whether for treatment of new tanks at time of erection, or of old tanks. Our authorized appliers do the work and make their own guarantee against leakage—on new tanks for 3 years, on old for 2 years.

While TNEMETANK is doing spectacular things in the "sour crude" areas, it is ideal for protecting all steel tankage, large or small, in all areas.

The Tnemec Company makes specialized coatings for every industrial requirement. TNEMEC No. 6 Red Primer rust-proofs steel. SUPER-TNEMECOL positively protects underground pipe lines. See the Composite Catalog, or write us for full information on any Tnemec product.

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of power. This has caused more and more emphasis to be laid on the antiknock value of gasoline as measured in terms of octane rating. The octane rating of motor fuel is governed by the type of hydrocarbons present and can be controlled by the cracking process. The average octane number of regular-grade gasoline sold in the United States in 1935 was estimated to be 70 whereas in 1936 it will average about 71. Straight-run gasoline sold as third grade has an average octane rating of 55.

TABLE 11—AVERAGE COMPRESSION RATIOS

Year—	Avg. compression ratio
1927	4.55
1928	4.86
1929	4.99
1930	5.15
1931	5.23
1932	5.29
1933	5.57
1934	5.72
1935	5.93
1936	6.15

The improvement in power output and fuel economy of a 55-octane number gasoline compared to one of 70 is conservatively figured as 15 per cent.

The total gasoline consumed in the United States has paralleled the increased registration of motor vehicles as shown in Table 12:

TABLE 12—GASOLINE CONSUMPTION COMPARED WITH AUTOMOBILES

Year—	Automobiles in thousands	Motor fuel consumption 1,000 bbls.
1920	9,232	108,946
1925	19,937	232,182
1930	26,524	398,075
1935	26,000	423,480

As the automotive industry continued to design engines capable of higher speeds and greater power, a continued increase in the ratio of cracked gasoline to straight-run of low antiknock value is indicated. This is shown in Table 13, as percentages against the crude oil refined.

TABLE 13—PERCENTAGES OF CRACKED AND STRAIGHT-RUN GASOLINES

Year—	Cracked gasoline % of total gasoline	Straight-run gasoline % of total gasoline
1920	12.9	87.1
1925	26.4	73.6
1930	38.0	62.0
1935	48.8	51.2

Not only do trends in automotive design require improved fuels, but the higher speeds of operation demand special lubricants. Here again the products of cracking are a source for at least part of the needed lubricating oils. The unsaturated hydrocarbons resulting from the cracking process can be polymerized to yield synthetic lubricating oils suitable for the great speeds of modern automotive and airplane transportation. Although these synthetic lubricants are produced commercially in relatively small amounts at present, the 2,229,000 bbls. of 1935 daily cracking capacity in the United States could supply more than enough raw material for such synthetic lubricants when necessary.

The improvement in gasoline quality and its cheapness due to the cracking process has made possible the ever-widening use of the automobile whose low cost has also contributed greatly to its use.

Diesel engines which burn oil are growing to be highly competitive with coal burning locomotives, ships, and stationary engines replacing steam boilers. This is an advance of significant proportions.

Gas Industry

Refinery gas has profoundly affected the manufactured gas industry by substituting it for gas from carbonizing coal, cracking of gas oil and water gas produced from coke and steam. Many gas manufacturing plants in the United States have been shut down due to the competition of not alone refinery gas but also natural gas.

The cracking process is producing about 300,000,000,000 cubic feet of gas per year which is used in part to produce synthetic chemicals, polymer gasoline, under boilers and refinery operation, for heating and lighting in competition with the manufactured gas industry. Cracked gases have an average heat content of about 1,400 B.t.u.'s as compared with 1,100 for natural gas and 540 for manufactured gas. The cracked gas is used as such for heating purposes or as a blending agent for gases of lower heating value. Gas companies have demonstrated that cracked gas may be used for "cold enrichment" and reformed or "cracked" to lower B.t.u. gas.

The reforming of cracked gas is either a process of cracking or may include its passing through an incandescent coke bed in the presence of steam, producing water gas. The object of this treatment is the production of a greater volume of gas with a lower B.t.u. content than the original gas. The reforming of cracked gas produces hydrogen which is being used for synthesis in the production of ammonia or in the hydrogenation of oils.

A large portion of the gas from the cracking process is composed of propane and butane. Since these hydrocarbons are readily liquefied and therefore transported in cylinders, tankcars, and pipe lines under pressure, a rapidly widening field of application for them has been developed. Liquefied gases are being used successfully for heating and lighting in homes located beyond the reach of gas mains and electric lines, and industrially where closely controlled temperatures are especially important. In small towns it has been found satisfactory to pipe these gases, in admixture only with air, to the consumer rather than to maintain a town gas plant, and in some cases this has actually supplanted gas-making plants. In the water gas industry, liquefied petroleum gases have proved to be excellent enriching agents. Propane's heating value of 2,550 B.t.u. per cubic foot and butane's at 3,200, added to their ease of handling, are clearly illustrative of the value of these gases for enriching others of low heat content.

It has been estimated that the cracking units in operation in the United States are a potential source of 900,000,000 gallons of liquid propane and even a greater amount of butane per year. These would be equivalent in heating value to about 70 per cent of the present manufactured gas output.

The remarkable growth of the liquefied petroleum gas industry has increased the yearly consumption of liquefied propane and butane from about 1,000,000 gallons in 1927 to over 33,500,000 in 1932.

The amounts of cracked gases obtainable as sources for propane and butane are more than ample to meet this growing demand in the gas industry.

Coal Industry

In the United States for many years coal was the leading fuel until the growth of the competition of oil. As illustration, from the year 1913 to 1926 coal advanced in tonnage from 478,000,000 tons to a maximum of 573,000,000—an increase of about 20 per cent. Fuel oil increased during this period from 114,000,000 bbls. to 365,000,000—an increase of over 200 per cent.

In 1934, 175,000,000 bbls. of the total of 325,000,000 bbls. of fuel oil used in the United States were cracked. This volume of cracked fuel is equivalent to over 46,000,000 tons of bituminous coal. Cracked fuel oil has a B.t.u. content on a volume basis of 10 per cent greater than the fuel oil produced by the atmospheric distillation of crude oil.

The effect of cracking upon the position of coal in the fuel field is not limited to oil. The enormous volume of gas produced from the cracking process effects the coal as well as the gas industry. The 300,000,000,000 cubic feet of cracked gas produced in 1935 are equivalent to about 18,000,000 tons of bituminous coal in heating value. In the year 1935 over 1,300,000 tons of coke were produced by the cracking process which is in direct competition with coal. Petroleum coke is now produced by the cracking process in a continuous manner which is enormously less expensive and far more efficient than the old batch process. Cracking runs of over 150 days of continuous coking operation are taking place in the oil industry.

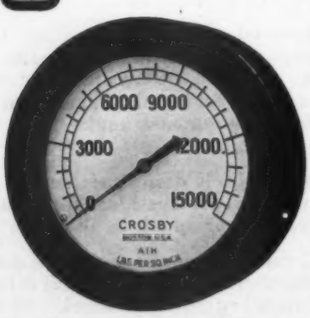
Chemical Industries

The large volumes of olefins produced each year in cracking gave the impetus to research in methods of utilization. The outcome of this has been the manufacture in commercial quantities of materials belonging to the following groups: Alcohols, amines, chlorides, glycols, nitro-glycols, chlorohydrins, ethers, ketones, acids, and esters.

The factors governing the nature and amount of gas produced in cracking are: Composition of cracking stock and operating conditions. The unsaturated hydrocarbons react readily to form addition products which may be intermediates for making other compounds. The chlorides, such as ethylene dichloride, may be made by simple addition. Chlorohydrins may be formed by the reaction of an olefin with hypochlorous acid; to convert the chlorohydrins to glycols is a simple matter of hydrolysis.

The volume of olefins produced each year from the cracking process is 50,000,000,000 cubic feet which gives a potential capacity of over a billion

CROSBY
The Gage with the Billion Cycle Movement



In a breakdown test, a Crosby gage movement was still going strong after 1,216,560,000 cycles—14 times longer than the best of the competing gage mechanisms. Credit this difference to the precision workmanship in Crosby gages and the rigid standards to which they are built.

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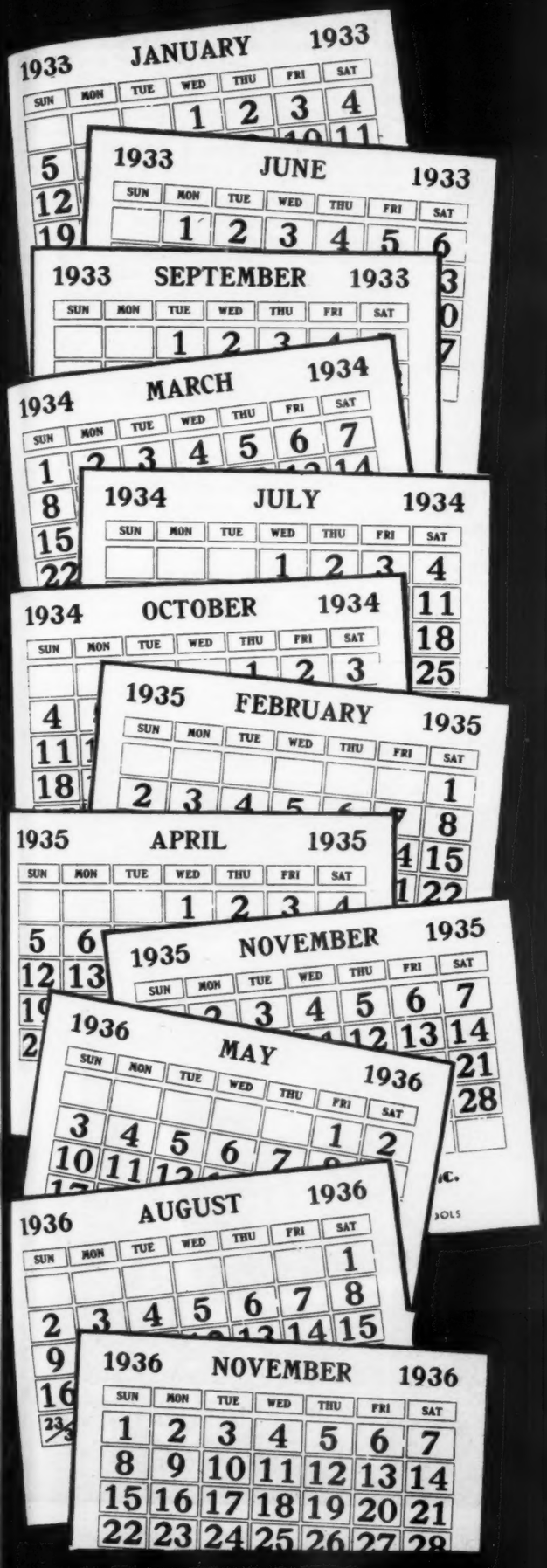
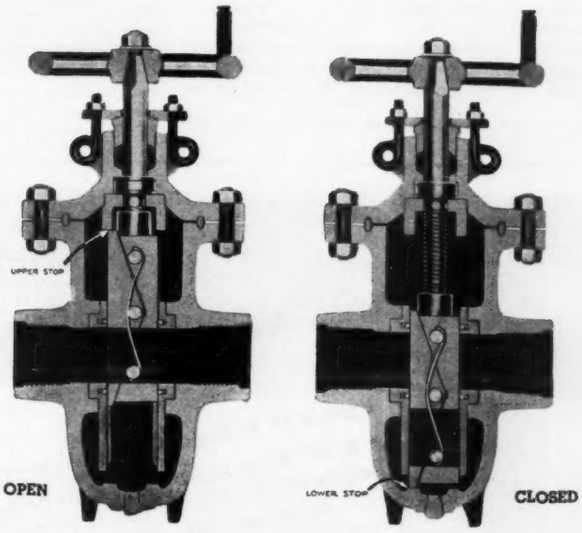
MONTH *after* MONTH
....through the Years–



its margin of Popularity over conventional valves KEEPS GROWING!

W-K-M GATE VALVE
Through-Conduit Lubricated



CHECK THESE ADVANTAGES OF THE W-K-M VALVE

1. Well-pressure, or line-pressure, is positively confined to throat of valve; whereas, in ordinary valves the entire body, bonnet and packing glands are exposed to pressure.

2. The Through-Conduit opening does not restrict flow.

3. In opening and closing valve, each moving part in the body operates in a mass of lubricant instead of a mere film of grease, which eliminates possibility of corrosion. A 3-inch W-K-M Valve, for example, contains approximately 6-pounds of lubricant.

4. Seat faces are not exposed to pressure or abrasion while in service. Any sediment carried down with the gate is automatically washed out when valve is opened.

5. Extreme ease of opening and closing continues indefinitely with addition of lubricant. Any good grade of lubricating grease is satisfactory.

6. Field tested for 3 years under every known adverse condition, and now being used extensively throughout all high pressure areas in Texas and Louisiana Gulf Coast.

Costs no more than ordinary valves

Sold through Supply Stores Everywhere

W-K-M Company, Inc.

OIL FIELD · PIPE-LINE & INDUSTRIAL EQUIPMENT

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Cable Address: "WILKOMAC"

gallons a year of alcohols such as: Ethyl, propyl, butyl, and amyl. The present output of ethyl alcohol from cracked gases is over 4,000,000 gallons a year at a price enabling it to compete with ethyl alcohol produced from grain or molasses.

The Carbide and Carbon Chemicals Corp. started (1935) the operation of a $10,000,000 plant at Whiting, Ind., to synthesize various organic compounds from the cracked gases particularly abundant there. Another synthetic chemical plant is projected costing $20,000,000 based upon cracked gases. The uses for these synthetic chemicals range from antifreeze agents (ethylene glycol) and explosives (nitroglycols) to medicinals (acetoacetanilide) and fumigants (ethylene oxide).

Resins have also been made by the use of $AlCl_3$ upon cracked distillates. The polymerized resin is valuable as a constituent of varnishes which dry exceedingly fast and are highly impervious to water, alkali, and acid. The resin is thermoplastic and can be molded when mixed with suitable fillers.

Conservation

The cracking process thus far has been the means of affecting a true conservation such as stated by Gifford Pinchot in 1910, "The first great fact about conservation is that it stands for development. There has been a fundamental misconception that conservation means nothing but the husbanding of resources for future generations. Conservation, however, demands the welfare of this generation first, and afterwards the welfare of the generations to follow. There may be just as much waste in neglecting the development and use of certain natural resources as there is in their destruction. . . . Conservation means the greatest good for the greatest number for the longest time. Conservation demands the application of common sense to the common problems for the common good."[22] The oil industry has made amazing progress along the line of conservation since that time.

The cracking process has a profound effect upon the conservation of crude oil. If the cracking process had not been developed it would have required over a billion barrels more of crude oil to operate the 26,000,000 motor cars in the United States during 1935. Since the intensity of search for new fields is influenced by the rate of exhaustion of the known supply; a retardation of depletion caused by cracking oils is felt by prospectors, producers, pipe liners, refiners—clear to the consumer of oil products. The oil industry is saving over a billion barrels of crude oil a year due to its ever-growing research to conserve oil and produce products of greater usefulness to society.

The research in utilization of all the products obtained by cracking has given the oil industry a place in the economy of the nation that has been equalled by few, if any other industry. The benefits, direct and indirect, due to the cracking process have been legion as reflected in the abundance of many useful products resulting therefrom.

[22]Mining and Scientific Press, Vol. 101, p. 668, San Francisco, 1910.

Fuel Competition Discussed Before Tulsa A.I.M.M.

Dr. H. T. Mann, associate professor of petroleum engineering, department of mining and metallurgy, at the Massachusetts Institute of Technology, addressed the Mid-Continent section of the American Institute of Mining and Metallurgy last Monday night in Tulsa. His subject was "Competitive Fuels," in which he traced the development of the fuel industry from its beginning.

Doctor Mann believed that the petroleum industry should educate the public to the fact that petroleum is just another fuel and in the future the industry will have to develop other markets for its products to add to present ones. In discussing possible markets he described how light fuel oils were competing with anthracite and heavy fuel oils were competing with bituminous coal in various sections of the United States. He believed that the oil industry would be able to increase its markets in most sections but that the price of fuel oils would be kept down to a level where it could compete with coal on a price basis.

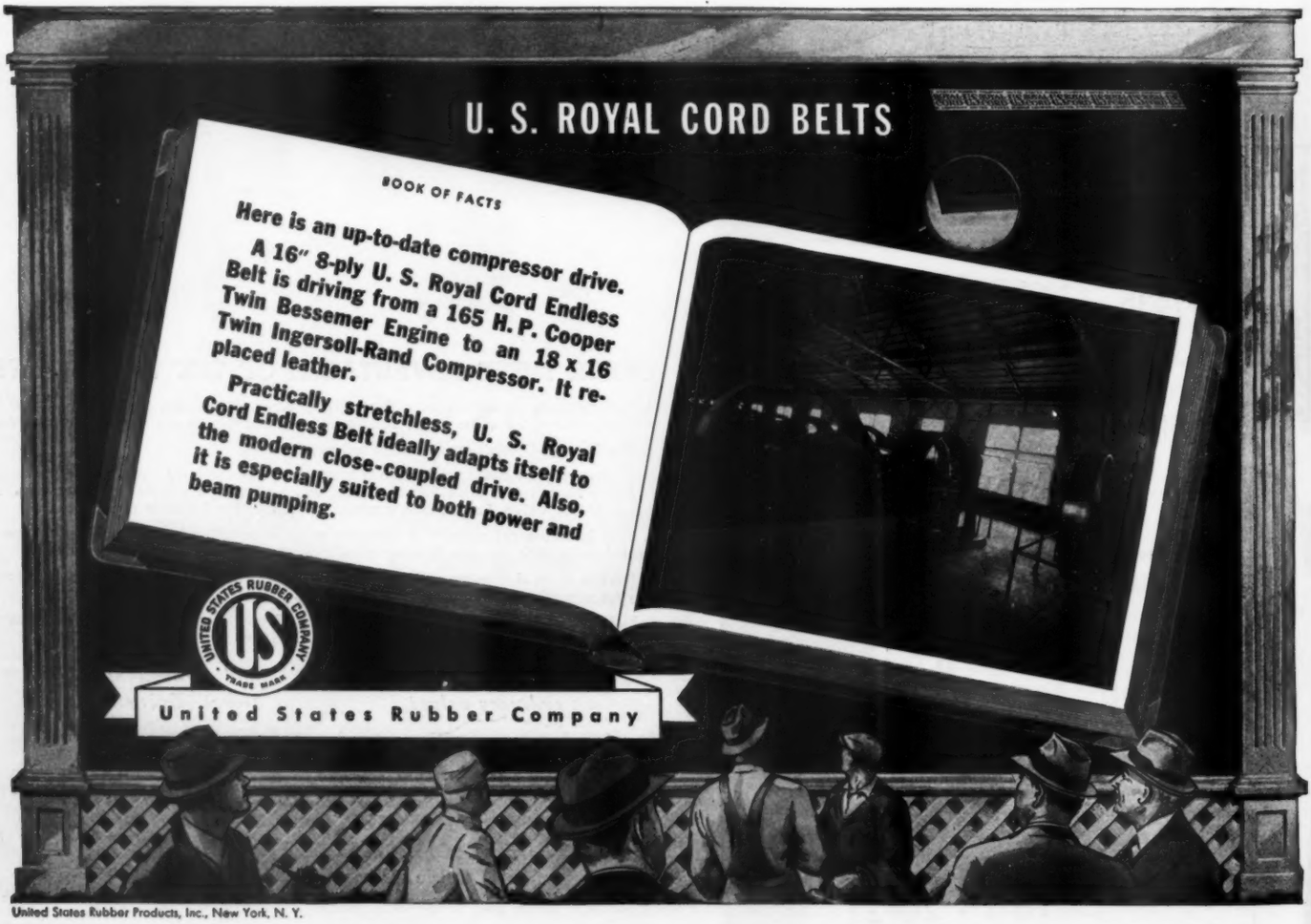
In discussing future markets he pointed out that in a triangle enclosing Birmingham, Ala., Milwaukee, Wis., and Boston, Mass., 40 per cent of the population of the United States lived. Although this area represented but 9 per cent of the total area of the United States, he stated, its populace annually consumed 50 per cent of the total used in the United States. Here, he felt, the petroleum industry should strive hardest to develop its future markets.

Doctor Mann's address was delivered before a large and thoroughly interested audience and following the lecture many questions were asked from the floor. Regarding reserves of coal and petroleum, Doctor Mann stated that there were sufficient coal supplies above the 3,000-foot level to last for over 4,000 years. He stated that the natural gas industry should continue to grow in importance due to its ability to compete with coal on a price basis at any point in the United States. This was primarily due to the fact that gas could be transported easily into areas where roads and the terrain made the transporting of other fuels difficult.

Doctor Mann is a former member of the faculty of the Missouri School of Mines at Rolla, and lived in Tulsa before going to Cambridge. He has been a professor at Massachusetts Tech for the past 15 years.

Refinery Expansion

BRANDON, Manitoba, July 6.—Central Refiners, Ltd., is engaging in an extensive construction program.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BOOK OF FACTS
Here is an up-to-date compressor drive.
A 16" 8-ply U. S. Royal Cord Endless Belt is driving from a 165 H. P. Cooper Twin Bessemer Engine to an 18 x 16 Twin Ingersoll-Rand Compressor. It replaced leather.
Practically stretchless, U. S. Royal Cord Endless Belt ideally adapts itself to the modern close-coupled drive. Also, it is especially suited to both power and beam pumping.
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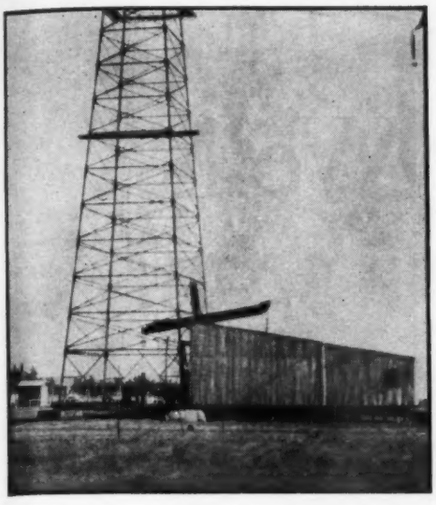
OPERATING IDEAS

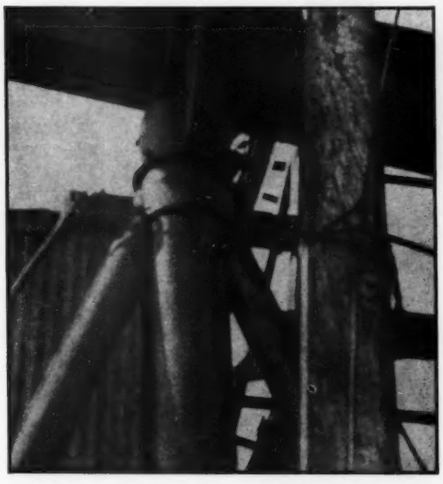


Pumping Unit in Belt Hall

In changing from a standard rig front with gas engine to an electric motor and pumping unit it was found unnecessary to purchase a special house for the new equipment. The engine house was removed for use elsewhere and the belt hall provided plenty of room to house the pumping equipment.

Casing Clamp on Samson Post

The accompanying photograph shows how a casing clamp was used in the construction of a steel samson post. The five-inch pipes used for braces behind and in front of the samson post are adjustable, since they have jack-screws at their bases. This makes



it possible to line the walking-beam up with the well more easily. A casting is used at the top of the post to hold the walking-beam.

Regulator on Gas System

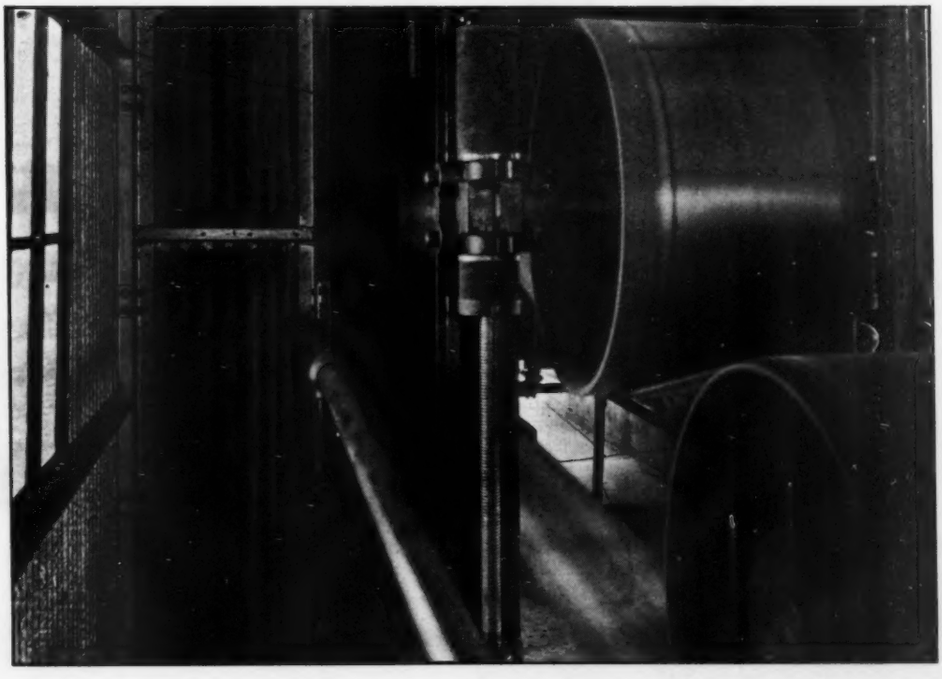
On many leases, gas for lease operations is purchased from other companies. Often leaks or breaks in the lease gas lines cause the gas bill to be much higher than it should be. In order to effect a saving of gas, many operators install a gas pressure regulator where the gas is taken from the main line. The pressure on the lease system is then lowered as much as possible to reduce the amount of leakage of gas and the amount which would escape in case of a break.

Drum to Catch Bleeder Fluid

In order to see if a well is pumping properly it is customary to open a bleeder valve on the tubing head. If a method for disposing of the fluid is not provided it accumulates in the cellar and on the derrick floor. One company is now using steel drums as shown in the accompanying picture at all wells in a district in Kansas. A connection from the bottom of the drum to the casing head drains the fluid back into the well. The size of the drum makes it practically impossible for gas from the casinghead to blow fluid out of the drum and onto the floor, so that the bleeder valve can be opened all the way. This gives the lease operator a more precise idea of how efficiently the pump is operating.

Static Electricity Eliminator for Belt at Pumping Well

An oil company operating in the Polo field has one well equipped with a belt which generates a large amount of static electricity. This creates a fire hazard and makes it unpleasant for the workmen to adjust the idler machinery. To correct this condition an insulated wire was suspended from the belt idler, allowing an uninsulated portion of the wire to travel on the inside of the belt. The other end of the wire was grounded. This was found to eliminate about 90 per cent of the static electricity. The condition encountered here is unusual, and the company engineers have not discovered why so much static electricity is generated at this well when practically none is generated at other wells located on adjoining leases.



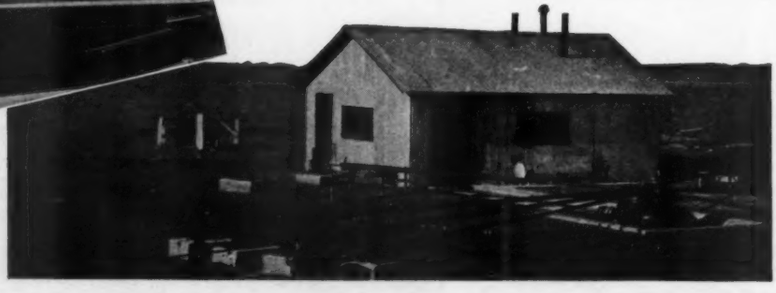
DRILL and PUMP Your Wells

This 30 - 8 C "Oilwell" Geared Power is direct-driven by a gear motor, handling ten 1700 ft. wells near Fellows, Calif.

(*Above*) TC-35 "Oilwell" Pumping Unit in California, driven by multi-cylinder engine.

(*Below*) 80-SC "Oilwell" Geared Power on a major producing company's lease in Kansas.

(*Above*) This SC-20 "Oilwell" Pumping Unit has a wheel type crank and back crank arrangement for pumping 3 wells at Gladewater, Texas.



the "OILWELL" *way*

These new units consist of either a 26" Model 34 Make-and-Break Rotary or a 27½" Model 35 Straight Rotary, direct-driven through a gear box by the "OILWELL" No. 7 (7¾" x 7") Vertical Twin-Cylinder Piston Valve Steam Engine—all mounted integral on skids for convenience and portability.

"Oilwell" developed the first direct driven rotary drilling unit which was thoroughly tested at Kettleman Hills. This unit is now in widespread use throughout the Mid Continent, California and Rocky Mountain fields.

This "Oilwell" direct driven rotary drilling unit saves fuel, steam, lubricating oil, and power. It eliminates operating the hoist and hoisting engine 90% of the time. It simplifies drilling the rat hole; makes spudding easier; and provides an effective means of "drilling up". The steam engine is equipped with hand controlled variable cutoff which makes use of the expansive force of steam.

After seeing installations of "Oilwell" pumping equipment, production men admit that "Oilwell" has the machinery and experience to handle any kind of pumping problem. "Oilwell's" experienced engineers have a real service to offer. They will help you pump your wells day after day at low cost, with the greatest recovery per dollar invested. Call on them to help you obtain greater efficiency and higher yield with "Oilwell" pumping equipment.

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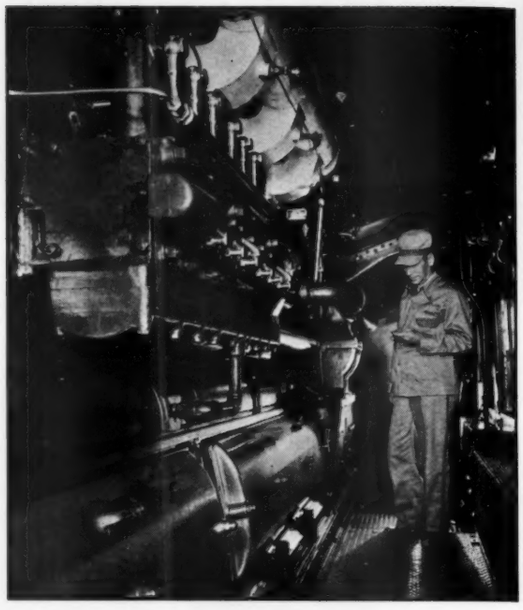
Oil Fuels for Diesel Engines



Six hundred and sixty horsepower new-type diesel engine for high speed railroad locomotive

Long regarded as a hulking piece of equipment that could go on working like a horse on almost any kind of fodder that could be scratched up, the diesel engine has, in recent years, been revealed as a machine definitely sensitive to its diet. No longer can the purchaser of diesel fuel specify merely "diesel fuel," "No. 2 oil," "fuel oil" or similar loosely descriptive terms. Well recognized by industry today, yet a research and development problem tackled over eight years ago by the Esso Laboratories, is the fact that particular types of engines and operating conditions require specific types of fuel for maximum economy and best all around results.

Developments in diesel engine design and manufacture, which are so rapidly widening the range of operating conditions successfully met, have had to be accompanied by ample supplies of suitable fuels as well as lubricants. Both have presented new problems, but the question of diesel fuel is probably the less understood by most operators.

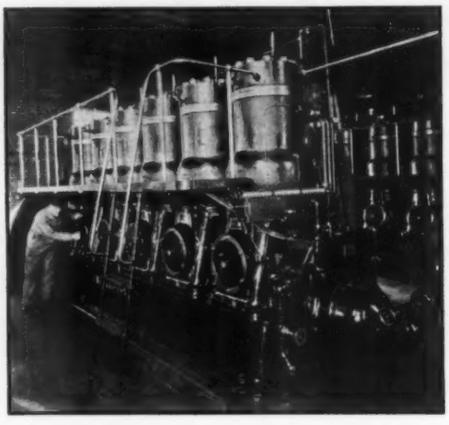
Diesel fuels have received active attention by Esso Laboratories and field organizations, with the result that in this rapidly expanding field of diesel power, the Esso Marketers have been world leaders in the development and distribution of high quality fuels as well as lubricants. A ship out of China, a diesel-powered tractor in agricultural Louisiana, or a power plant in the industrial East can now obtain the correct products and in any needed quantity.

Some of the factors involved in diesel fuel performance should be of interest to those connected with diesel operation. Fuel characteristics now known to be of importance to diesel engine operation include the following points:

Ignition Quality

Ignition quality is, broadly speaking, a measure of the ease with which a diesel fuel ignites on being injected into the highly compressed air at the end of the compression stroke. Particularly in the higher speed engines, ignition quality is one of the most important single characteristics of a diesel fuel. Adequate ignition quality insures: Ignition of the fuel quickly enough to prevent excessively rapid pressure development, and provide smooth combustion without excessive "knock"; maximum life of connecting rod bearings, due to elimination of knock and pounding; complete combustion early in the power stroke, providing maximum power with minimum smoke; reduction of cylinder wear due to elimination of unburned fuel residues which stick rings and corrode cylinder walls; accurate ignition and clean combustion at light loads; ability to change load rapidly.

A standardized means for evaluating ignition quality has not as yet been adopted by the industry at large. Probably most commonly used are diesel index, a value determined directly from the chemical characteristics of the fuel, and cetane number, a value determined by one of several engine test methods in a manner similar to the determination of octane number for gasoline. Diesel index values for commercial diesel fuels readily available vary from about 20 to 60, while cetane numbers vary from about 30 to 60, the higher numbers indicating the fuels of higher ignition quality.



Large diesel in municipal power plant

Ignition quality of diesel fuels varies widely with types of crude oil and with the manufacturing methods by which the fuel is made from that crude oil. Maintenance of uniform standards of diesel fuel ignition quality is greatly facilitated by the Esso Marketers wide variety of crude sources and manufacturing operations.

Viscosity

Viscosity has the same significance to diesel fuels as to lubricating oils, although viscosities of diesel fuels, while varying widely, are generally much lower. Viscosity affects pumping and handling, and must protect against leakage past closed injection valves, or injection pump plungers. Worn pump plungers permit more rapid leakage of lighter diesel fuels which, therefore, sometimes deliver less power unless fuel pump settings are corrected. Low viscosity fuels settle dirt rapidly, pump and filter readily, and often burn cleaner than heavier fuels under varying load conditions. They are, therefore, more generally in use for lighter, particularly mobile engines. Engine types and their mechanical and operating conditions have an important bearing on the proper fuel viscosity.

Gravity

Gravity of diesel fuels is primarily a measure of their weight per unit volume. Due to the ease of its determination, gravity is probably the most frequently referred-to characteristic of diesel fuels, although its significance, unless considered in conjunction with viscosity and distillation, is relatively small. Heating values of diesel fuels vary with gravity, but the variation within the range of ordinary fuels is not great. Heating value usually has far less effect on fuel economy than other characteristics of the fuel used.

Distillation

Distillation involves the determination of the amounts of fuel constituents of various boiling points which together comprise the fuel. Distillation is not of particular significance to large, low-speed engines, but becomes of considerable importance in fuels for lighter, high-speed engines. Carbon formation, smoke, and accumulation of unburned fuel residues become particularly critical with high-speed engines, and accurate control of final boiling points and distillation range is necessary. All fuels for high-speed, and for many medium-speed, engines should be distillate fuels, that is, condensed entirely from the vapor formed during the manufacturing operation, to assure cleanliness and clean burning.

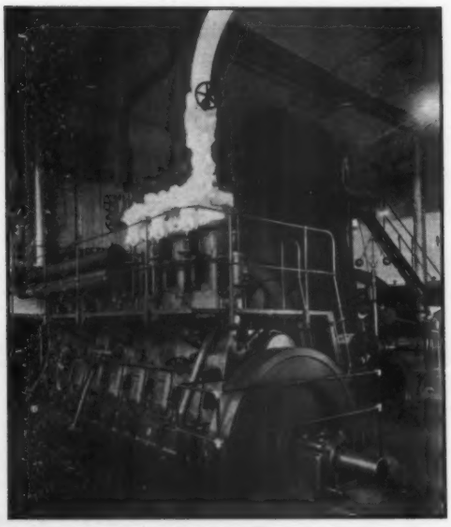
Carbon Residue

Carbon residue, as usually referred to, means the amount of solid carbon remaining after heating the fuel to quite a high temperature in a covered dish. In a general way, carbon residue is indicative of the tendency of the fuel toward nozzle and piston carbonization, although its value is much greater in distinguishing between distillate and non-distillate fuels. Carbon residue must be very low in fuels for high speed engines, but for properly designed lower speed engines, cheaper fuels of relatively high carbon residues are entirely satisfactory.

Pour and Flow Point

Pour point, or the minimum temperature at which the fuel remains liquid, is of particular importance to mobile installations operating at low atmospheric temperatures. Pour point must be below the minimum temperature reached in

(Taken from "Esso Oil-Ways," published by Esso Marketers, subsidiary of Standard Oil Co. of New Jersey.)



Diesel powering refrigerating compressor

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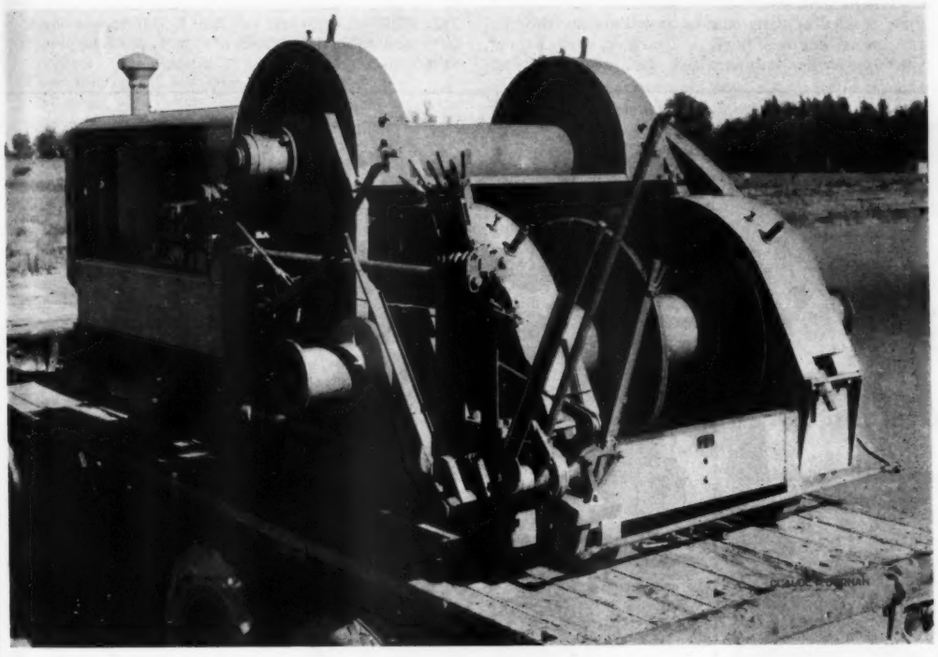

A Hopper Type "G" Draw Works and Drilling Unit being used in the Mid-Continent for heavy duty service. Its general specifications are given to the right.

PORTABLE EQUIPMENT TO MEET EVERY REQUIREMENT

Hopper Hoists and Draw Works are made in different sizes to meet any general or specific demand and range from 36 h.p. to 325 h.p.; they are powered by gas engine, Diesel or electric motor of any make desired; they may be mounted on tractor, truck, trailer or on skids for mounting in field shops; they are furnished with six or four speeds forward and two reverse; their line capacities range from 3,000 feet to 11,000 feet of ¾-inch cable. Hopper Hoists are supplied with or without Sand Reel and Rotary Drive Attachments.

General Specifications of HOPPER TYPE "G" DRAW WORKS and DRILLING UNIT Double Drum—Type 3-C Transmission—Four Speeds Forward and two reverse—powered by Caterpillar D-13000 power unit . . . .

DRUM: Cast alloy steel; flange diameter 42"; Spool diameter 13¼"; distance between flanges 46".
Brakes: 2—41" diam. x 8" wide equalized and compounded.
Line capacity: 4800 ft. 1" diam. line; 8550 ft. ¾" diam. line; 15180 ft. 9/16" diam. line.
Clutch: Hopper friction clutch in drum—self adjusting.
Drum drive: Gear and pinion, heat treated alloy steel, machine cut. Drum mounted on alloy steel shafts, with roller bearings.

TRANSMISSION: Type "3-C"—Cast semi-steel case. Shafts—heat treated alloy steel. Gears—machine cut, heat treated. Bearings—all shafts and idle gears mounted on roller bearings. Transmission—constant mesh type, speed changes by means of sliding finger type clutches, positive locks insuring engagement of only one gear change at a time. Case enclosed—all gears and bearings run in oil.

PRIME MOVER: Caterpillar "D-13000" Diesel power unit, 125 h. p:. 850 r.p.m., 6 cylinder, 5¾" bore x 8" stroke. Displacement—1246 cu. in.

SPEEDS and PULLS:

Gear	Drum R.P.M.	Single Line Pull —Bare Drum—	Line Velocity—F.P.M. —Bare Drum—
1	30	34,600 Lbs.	112
2	51	20,400 Lbs.	190
3	75	13,800 Lbs.	280
4	130	8,000 Lbs.	485

DRIVE FROM ENGINE TO TRANSMISSION: Multiple strand roller chain with cut tooth sprockets.

SAND REEL—Type "G":
Fabricated steel—welded construction. Clutch—Hopper Friction Type, 7½" face, 27" diameter. Flange diameter, 36". Distance between flanges—50". Spool diameter—13¼".
Brake: 2—35" diameter x 8" wide. Line capacity—11,000 ft. 9/16" line. Drum mounted on alloy steel shafts, with roller bearings. Weight—sand reel—2,465 lbs.

SAND REEL SPEEDS & PULLS may be the same as those of the main drum, but the entire bracket can be raised or lowered to suit existing conditions.

WEIGHT:
Double drum draw works as specified above, with power unit, mounted on heavy structural steel base (skids)—Approximately ..... 24,000 lbs.

Send for Details on the Size and Type Hopper Hoist to Meet Your Conditions

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c/o Hopper Machine Works, Inc.
Bakersfield California

There is a HOPPER PORTABLE HOIST for every need

service. Ordinarily, the better fuels for high-speed engines are of high pour points, and it is to advantage to consider means for maintaining higher than atmospheric temperatures in fuel systems of mobile units operating at low temperatures. Careful manufacturing specification and control, however, insures minimum pour point consistent with the necessary quality of the fuel.

"Sediment and Water"

The term "sediment and water," as used in the industry, does not necessarily mean suspended or solid sediment in the fuel. "Sediment and water" means strictly the amount of material precipitated by dilution with equal parts of benzol and separated by centrifuging. This value is largely an indication of the storage stability of heavy fuel oils. For such, it is important that close limits be maintained, to insure freedom from any difficulty from handling or storing heavy fuels. For the lighter engines, using distillate fuels, "sediment and water" specifications must be held strictly to a negligible value, insuring against any accidental contamination which would cause difficulty in the engines or fuel systems.

Sulfur

Sulfur content may be of particular importance in certain types of engines under particular conditions of service. Sulfur content, if excessive, may accelerate cylinder wear, and must be held within strict limits to avoid the formation of acids which cause the wear.

Ash Content

Practically all crude oils contain traces of ash. In diesel fuels containing residual stocks (fractions of crude oil remaining after lighter products have been distilled off), this ash content may become of great importance. The presence of a small trace of certain types of ash has been known to increase cylinder wear markedly. Careful selection of crude sources and maximum care in refinery operations are necessary to insure minimum ash contents of fuels, especially for those for larger engines.

Corrosion

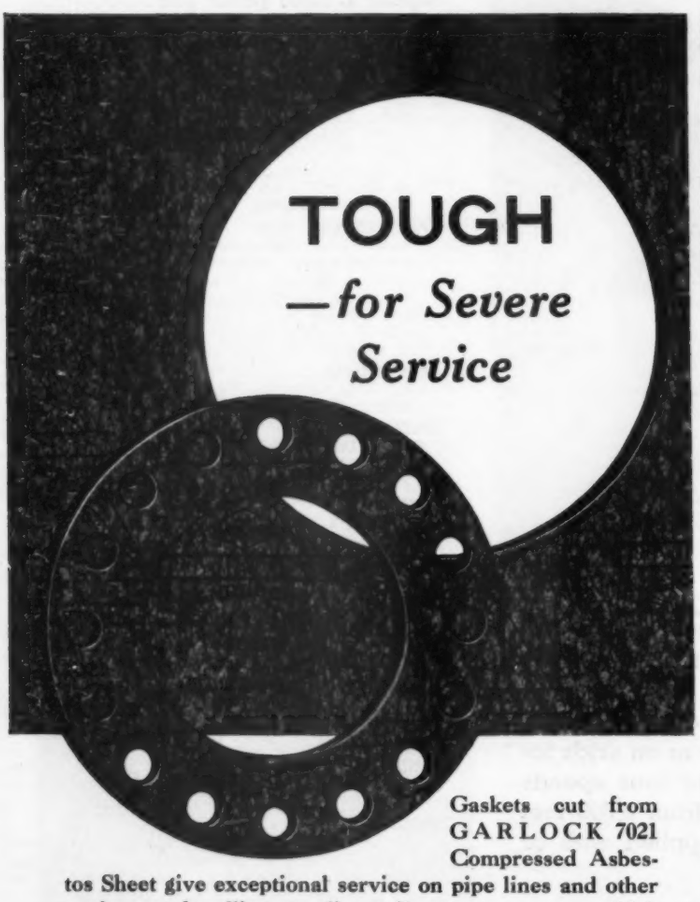
Careful tests are made on a properly manufactured fuel to insure that it is non-corrosive to materials in the engine or in the fuel handling system. This is important not only to the very precisely-machined injection pumps and nozzles, but also to the fuel handling system itself. Filters, valves, and transfer pumps should not be corroded, and, particularly in marine installations, the fuel for many engines must not affect even copper. Only carefully standardized and accurately administered tests can insure maximum service from all components of the fuel system.

Grease Manufacturers Plan an Interesting Fall Program

The board of directors of the National Association of Lubricating Grease Manufacturers, Inc., met recently at White Sulphur Springs, W. Va. At this meeting the board voted to broaden the activities of the association and appointed the various committees necessary for the development of an interesting program of speakers and activities for the fourth annual convention, which is scheduled to be held in Chicago on Monday and Tuesday, October 12 and 13, at the Stevens Hotel.

Canadian Western Renewals

CALGARY, Alberta, July 3.—The Canadian Western Natural Gas, Light, Heat & Power Co. has commenced work on renewals and renovations of its distributing system at Claresholm, and in July will start work on the Lethbridge system. Renewals and improvements will also be made at Okotoks and Macleod this summer.



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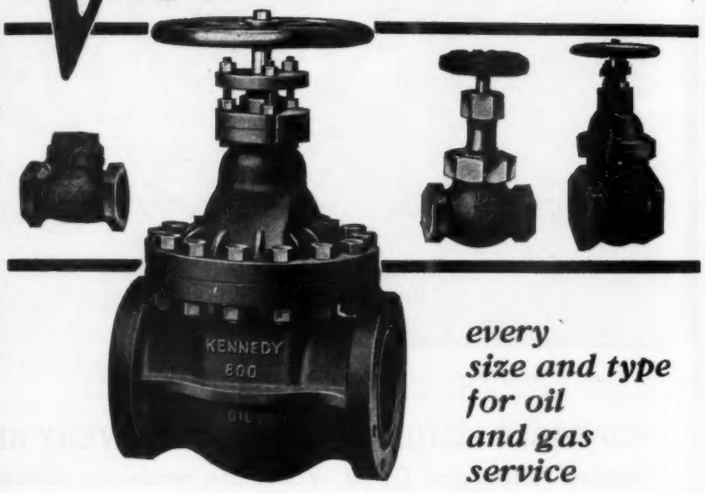

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TECHNICAL ABSTRACTS

Polaroid

By EDWIN H. LAND
Land-Wheelwright Laboratories, Inc.

Before White Sulphur Springs, W. Va., meeting of the Society of Automotive Engineers.

A new material which has been developed to satisfy the optical, mechanical and economical demands of lighting equipment for automobiles is discussed by the author. The new material, "Polaroid," was developed in an endeavor to solve the headlight-glare problems and consists of a shatter-proof lamination of cellulose acetate between plate glass. The cellulose acetate, which polarizes any light passing through it, is of about the same thickness as movie film, and of much the same texture. The completeness with which a polarizer polarizes the light which passes through it can be measured visually by placing one piece of the polarizer over another and turning them until they are in the "crossed" position; for this is the primary function of a polarizer intended for automobile use. Mr. Land states that with specimens of Polaroid the transmission ranges from approximately 30 per cent in the parallel position to about one-tenth of 1 per cent in the crossed position; an intensity ratio of 300. The invisible ultra-violet rays are said not to pass through the Polaroid at all, while the infra-red light passes through with practically no reduction and remain unpolarized. However, the latter can be blocked if desired. The author states that Polaroid is mechanically stable; it is not affected by shock or vibration. It is also resistant to heat, temperatures of 250° F. continued for a long time appearing to have no effect. Age and exposure to ultra-violet light also appear to have no affect on the material. In conclusion the author discusses other commercial usages and applications to which Polaroid is being successfully applied and may be applied in the future.

Photo-Electric Combustion Analysis

By R. A. ROSE, G. C. WILSON and R. R. BENEDICT
University of Wisconsin

Before White Sulphur Springs, W. Va., meeting of the Society of Automotive Engineers

Studies of combustion in a high-speed internal combustion engine are complicated by the fact that the entire process must be completed during a period of time which is less than 1/100 of a second. The process of combustion is even more complicated in the diesel engine than in the gasoline engine, because in the former the liquid fuel is injected into the cylinder only a few thousandths of a second before combustion must occur; and during the brief interval in which the piston approaches and passes through the dead center position, the fuel must be injected with a pressure sufficient to cause atomization and affect proper penetration. At the same time the fuel must be mixed with the air in the combustion space, and the minute particles must vaporize, ignite, and burn at a rate that will build up pressure quickly but not so suddenly as to cause shock and roughness. There are many ways of partially controlling this action, one of which lies hidden in the fuel itself. It is the authors' belief that the future development of the high-speed diesel engine depends upon the successful solution of the problem of igniting and burning the fuel. Once the behavior of the fuel in the combustion chamber is clearly understood, the refiner can prepare the fuel without undue expense.

The high-speed indicating system described by the authors is purely a research set-up which required painstaking care to insure proper operation of all parts at the same time. When operating, many photographic records can be obtained from an actual engine operating at speeds up to 1,200 r.p.m. or faster. Three impulses are obtained for a single cycle, these being at the present time: (1) Movement of the needle valve stem in the fuel injection nozzle (valve stem); (2) radiation emission in the combustion chamber; and (3) pressure in the combustion chamber. In the first series of tests two fuels were used, one being a special diesel fuel of 70 cetene number and the other is a gas-oil with a cetene number of 60.

The high-speed indicating system used for studying the combustion properties, recording as it does three simultaneous impulses, furnishes a means for studying a great array of combustion problems for both diesel and Otto cycle engines. Detonation in the gasoline engine, behavior of fuel dopes, and spectrum analysis in both types of internal combustion engines can be studied. A microphone can be substituted for one of the other pick-ups to study the sound accompanying fuel knock. Also, light or pressure can be picked up at different parts of the combustion chamber and the rate of travel studied.

Future Possibilities of 100 Octane Aircraft Engine Fuel

By FRANK D. KLEIN
First Lieut. Army Air Corp.

Before White Sulphur Springs, W. Va., meeting of the Society of Automotive Engineers

Developments of the fuel industry made possible early in 1934 the production of commercial iso-octane on a large scale, at a cost sufficiently low to assure a promising future for iso-octane blends having an anti-knock value considerably above that available for service use in the past. Full-scale engine tests conducted by the Air Corps in 1934 showed that an increase of 15-30 per cent in power output is possible with Army 100-octane fuel over that obtainable with Army 92-octane fuel. For maximum output, high degree of supercharge without the use of very high compression ratio is desirable. To obtain maximum economy, high compression ratio is essential, and degree of supercharge need be only great enough to provide the necessary power for take-off and altitude performance.

Results of tests on regular Army 92-octane fuel, iso-octane and iso-octane plus lead are discussed by Lieutenant Klein. One conclusion indicated by the results was that additions of lead in concentration as high as 6 ml. per gallon are advantageous. He also stated that the results obtained on the Army high output engine cannot be applied directly to predicting full-scale performance, particularly of highly-supercharged air-cooled engines not equipped with intercoolers. Full-scale engine tests of the past have indicated that the present knock test methods rate highly aromatic fuels as closely in line with their multi-cylinder performance as can be expected in view of their marked differences in relative performance in various types of engines.

The author states that the use of fuels of highly aromatic content, containing no iso-octane, might be of decided value in the future, particularly since new methods for the economical production of aromatics are now available which make it appear certain that considerable more can be produced than was available 15 years ago. In addition, other processes are being developed for the production of high anti-knock fuel which will not only increase the available supply and reduce the cost of 100-octane fuel, but will also make available large quantities of much better fuels. To take maximum advantage of the 100-octane fuel, he believes that engines must be specifically designed for its use. Furthermore, due to the marked advantages of the 100-octane fuel it is his belief that there is no doubt that the high octane fuel will be adopted for general airline use in the not too distant future. Also there is every reason to believe that quality of fuel will continue to improve in the future. As better fuels become available, engines will be designed to take advantage of them; and conversely, as newly designed engines are found to give improved performance with higher anti-knock fuels, methods of producing the better fuels will be developed.

Slow-Motion Pictures of Knocking and Non-Knocking Engine Explosions Recorded With a New High-Speed Camera

By LLOYD WITHROW and GERALD M. RASSWEILER
General Motors Corp.

Before White Sulphur Springs, W. Va., meeting of the Society of Automotive Engineers.

In studying flame propagation within a gasoline engine the explosion can be examined only at a few definite points in the combustion space, or, at best, in certain limited areas. Therefore, the authors found that it was not possible to obtain detailed information about the flame propagation throughout the entire combustion space in any single engine. In overcoming this difficulty it was necessary to solve two problems. First, the construction of an engine fitted with a window which allows an unobstructed view of the entire combustion space, and, secondly, the design and construction of a high-speed motion picture camera which records the phenomena taking place within this combustion space. Fused quartz was chosen as a window material, because previous experience with this material in small windows had shown that it withstands engine-flame temperatures satisfactorily when properly mounted. Some difficulty was experienced in sealing the window frame to the cylinder block without cracking it, because the cylinder block changed its shape slightly when the engine heated up.

To meet the following requirements a special high-speed motion picture camera was designed to study the combustion phenomena of the engine. First, the number of pictures per second must be extremely high if sufficient pictures are to be obtained during a single explosion to permit a careful study of the flame propagation; second, as all the light available for photographing the flames comes from the flames themselves, the optical system must be fast and efficient; third, the pictures must be sufficiently large so that details of the flame structure are not lost; and fourth, the angular position of the crankshaft at which the picture is taken must be known.

A description of a typical set of flame pictures is given in which is shown the flame propagation in a single explosion occurring when the engine was running 2,000 r.p.m. on a nonknocking fuel; a blend of gasoline and benzene being used in this instance because of the high luminosity of the benzene flames. Other sets of pictures were also obtained while the engine was operating on iso-octane at a speed of 900 r.p.m.; and while using a gasoline of 48 octane number with the engine operating at 900 r.p.m. One important feature brought out in these studies is the tremendous increase in velocity of the luminous spots at the time of knock, the authors state, the gas motion being induced by the sudden burning and expansion of the portion of the charge which burns last. The violent gas movements occuring just after the knock are believed to be closely related to the three undesirable consequences of knock; namely, the sound, the increased jacket temperature and the loss of power.

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"SICROMO" Tubes compare favorably with the high chrome alloys in other characteristics, including creep strength, reserve strength, and high temperature yield stress value. It will pay you to use "SICROMO" Tubes wherever high oxidation and corrosion resistance is called for. Write for further information and tell us what type of tubes you are using at present.

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ELECTRIC FURNACE AND OPEN HEARTH • ALL STANDARD AND SPECIAL ANALYSES

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Location of Gas for U. S. Helium Supply and Extraction Process

Where is the natural gas produced from which the supply of helium for use by the government is obtained? How much helium is in the gas; what is the process for extracting it, and how much does it cost? —M. C.

The United States owns about 50,000 acres, on what is known as the Cliffside anticline, near Amarillo, Tex., where five gas wells have been drilled for the natural gas which contains approximately 1.8 per cent helium. It is estimated that this structure contains enough gas to supply the needs of the United States for many years. The volume of the natural gas produced between May 10, 1929, and December 31, 1934, was 3,880,000,000 cubic feet, which, when calculated on the basis of the drop in pressure, appears to represent about 2 per cent of the total reserves.

The method for removing the helium is based on a combination of chemical treatment and low temperature fractionation under high pressure. The gas is received under a pressure of 600 pounds and is first passed through a sodium hydroxide solution (caustic soda) for the removal of carbon dioxide. The next step is to cool the gas to about 300° F. below zero, which causes 95 per cent of the gas to become liquid. The cooling medium is chiefly expanding nitrogen. The nitrogen, under a pressure of 500 pounds, passes through an engine from which it is expanded and the exhaust gas cooled in several stages. The combination of the expansion, from 600 pounds to 75 pounds pressure, of the natural gas and the cooling with nitrogen, concentrates the gas to approximately 50 per cent helium. The final stage is to subject the gas to a pressure of 2,000 pounds and cool with liquefied nitrogen. The gas is finished to contain better than 98 per cent helium.

The Amarillo plant produced up to December 31, 1934, 64,860,410 cubic feet of helium at a net cost of $8.60 per 1,000 cubic feet.

Reference: Article on Helium by Kennedy and Seibel, Mineral Year Book for 1935, Part 3, page 867.

Naphthenic Acid From Petroleum and Possible Commercial Uses

I wish to know if naphthenic acid is extracted from petroleum as a commercial article. What uses are made of naphthenic acid? Whatever information you give me about this will be appreciated.—E. U. A.

A very complete discussion of the naphthenic acid content of petroleum was given by V. L. Shipp in The Oil and Gas Journal early this year. It was stated that the petroleum industry of the United States had not made serious efforts to adapt the methods of refining crude oil and the several fractions to the separation of naphthenic acids. Much progress has been made in the manufacture of naphthenic acids from Baku oil; it is estimated that in the year 1913 there were 4,000,000 pounds prepared and this increased to 35,000,000 pounds in 1934. The naphthenic acid content of the Baku oils varied between 0.20 per cent in the Surakhani, mixed base, oil to 1.10 per cent in the light naphthenic Balakhany oil. The California oils of this type are reported to contain from 0.01 to 3.0 per cent. The Hosston, La., oil shows 0.7 per cent and a Gulf Coast oil 0.6 per cent.

There is a limited use made of the free naphthenic acids; some are required for a rubber reclaiming process and a process for breaking crude oil emulsions with naphthenic acids is mentioned.

"There is considerable confusion in the trade about the tern 'naphthenic acid.' The following should be remembered: Naphthenic acids are monobasic carboxylic acids of the general formula R. COOH where R is a naphthene (cylic hydrocarbon) radical. These acids exist naturally in crudes and distillates therefrom, and can be extracted by caustic wash. They should not be confused with sulfonic acids, sometimes incorrectly called sulfo-naphthenic acids. The sulfonic acids have a general formula $R.SO_3H$ and are derived from the sulfonation of hydrocarbons, e.g., as by-products from treatment of medicinal, white oils and transformer oils with strong sulfuric acid. The sulfonic acids and their soaps are marketed in Europe under the trade names of Petrov's reagent or 'Kontakt' and in this country as mahogany acids and soaps, their value being in their emulsifying, detergent and fat hydrolizing properties."

The largest quantities of the acid are found in American oils is in the three over-lapping fractions kerosene gas oil and light lubricating oils. The method is to wash these fractions with an alkaline solution in which the acid is concentrated in a form easily recovered by chemical treatment. The tendency is for our refiners to include in their operations methods for the manufacture of chemical compounds and the naphthenic acid separation from the gas oil fraction will enable the refiner to supply another product and at the same time improve the quality of the gas oil for use as diesel fuel.

Reference: V. L. Shipp, The Naphthenic Acid Industry, The Oil and Gas Journal, March 19, 1936, page 56.

SPECIFICATIONS

CUT-BACK ASPHALT FOR ROADS

(Part 2)

TABLE 1b—PHYSICAL AND CHEMICAL PROPERTIES

	RC-1	RC-2	RC-3	RC-4
Designation				
Flash point °F., Min.	80 for all			
Viscosity, Furol, seconds at				
122°F.	80/160	200/400	.....	.....
140°F.	.....	.....	275/400	700/1400
Total distillate, % by vol. to				
374°F.	5/x	.....	.....	.....
437	12/x	10/x	3/x	0.5/x
600	25/x	20/x	14/x	7/x
680	x/40	x/35	x/30	x/25
Residue				
Penetration 100 g. 5 sec., 77°F.	60/120 for all			
Ductility 77°F. cms.	60/x for all			
Solubility in carbon disulfide %	99.5 for all			

It is the purpose of this specification to describe cut-back asphalts suitable for use as primers and surface treatments and in the construction of wearing surfaces of the mixed-in-place plant-mixed methods, by physical and chemical requirements.

(Part 3 will follow)

The Quality of Aviation Fuels and Quantity of Lead Permitted

We are interested to learn what are the specifications showing—octane number, ethyl lead content, distillation and other requirements for aviation gasolines now being supplied by refineries.—A. B. C.

SPECIFICATIONS FOR AVIATION GASOLINES

Composition—Hydrocarbons

	U. S. Army Spec. 2-95 June 19, 1935	U. S. Army Spec. 2-93 Apr. 15, 1935	U. S. Army M-222
Oct. No., min. ..	98	65	73; 80; 83; 87; (±2 toler'nce)
Tetraethyl lead permitted, max.	6 ml/gal.	.....	0; 1.63; 3.5; 5.0
Color	Blue (21 Say. min.)	.....	25+min.; blue
Accelerated gum, max.	10 mgm	.....	10 mgm
Distillation—			
Pct. evaporated:			
10 max. °F. ...	167	158	167
50 max. °F. ...	212	230	212
90 max. °F. ...	275	320	275
Sum, 10% + 50% points, min. ..	307	307	.....
Water tolerance.	± 2 ml.	± 2 ml.	.....
Gum, copper dish, max.	.....	3 mgm	.....
Acid heat, max., °F.	.....	.....	20

These are common for all grades and are maximum—B.s.&w., nil; corrosion, negative; sulfur, 0.10 per cent; distillation residue, 2 per cent; Reid vapor pressure, 7 pounds; freezing point, —76° F.

The U. S. Army 2-93 is a gasoline of low antiknock value used as a domestic fuel for engines of low compression ratio. The 2-95 specification and M-222 are for high-speed operation. The combination 10 per cent and 50 per cent points is for the purpose of controlling the quantity of very volatile gasoline. The acid heat test mentioned in M-222 is now considered of little importance, but designed to control the quantity of cracked gasoline that may be present in the fuel.

Distilling and Other Properties of Technical Grade White Oil

I have been looking for the distilling properties of white oil in the industrial grade and wish to know if you have this information, together with the usual tests on the oil—A. W. T.

There are several grades of the white oils, commonly distinguished by specific gravity and Saybolt viscosity at 100° F. The distillation data available are for the extra light oil of about 0.865 specific gravity with a Saybolt viscosity of 80 at 100° F.

DISTILLATION OF LIGHT WHITE OIL

Initial boiling point	563° F.
Per cent recovered	Temp., °F.
1	572
2	590
18	608
31	626
44	644
56	662
66	680

The additional properties of this oil are:

Gravity, A.P.I.	32.6
Viscosity at 100°	80
Pour test, °F.	—40
Flash point, °F.	320
Cloud point, °F.	—4
Color	W.W.

Oils of this type are not used in medicine but have a wide application in the industries.

PROBLEMS FROM READERS

Edited by T. F. Smiley

Heat Losses in Drilling Operations May Be Decreased by Insulation

I would like to get some facts concerning the value of insulation of boilers and steam lines in the operation of a drilling rig. In what form is the insulating material obtainable? Can you give me some idea of what the loss of heat amounts to where the boiler and steam lines are not covered with some kind of insulating material?—E. T. O.

Insulating material in sectional form is obtainable for application to boilers and steam lines. Where the boilers and steam lines must be moved often the problem of protecting the insulation against damage becomes a difficult one. In some California fields, where a single boiler location is used to drill several wells, it is regular practice to use insulation to reduce heat radiation. It is believed probable that as drilling operators realize more fully the savings effected by insulation, its use will become more general.

It is pointed out by M. W. Phelps in a discussion of this subject that tests conducted by H. M. Harris and J. E. Eckel show there is a loss of 23.8 per cent by radiation, convection, etc., where boilers are not protected by a house and are not insulated. This figure will vary according to weather conditions, but under the most favorable conditions these losses are substantial. As an example, radiation losses from bare steam pipes may be expressed as 4.04 B.t.u. per square foot per degree per hour with a temperature difference of 400 degrees. A 4-inch steam line 200 feet long has 236 square feet of radiating surface. The loss based on the above would be 382,000 B.t.u. per hour and this is for quiet surrounding air. If a strong wind is blowing or if it is raining, the loss would be much greater. The total heat in 1 pound of saturated steam at 250 pounds per square inch gauge is 1,201 B.t.u. The radiation loss, therefore, is equal to that required to evaporate 320 pounds of water per hour at 250 pounds per square inch gauge pressure. This most favorable example results in approximately 2 per cent loss of the total hourly average of water fed to the boilers. Considering weather conditions, steam lines submerged in water and other unfavorable circumstances, it is seen how there might be a loss of 20 per cent or more due to radiation and convection from uncovered boilers and steam lines.

Repressuring With a Gas From Above or Below Oil Sands

The practicability of using gas for repressuring purposes from a separate sand above or below the oil sand to be repressured is a subject on which I would like some information. Can you tell me just what procedure should be followed in the employment of such a program? Are there any legal impediments to adopting this course?—R. S. G.

Use of gas from a separate sand to stimulate the production of oil from an oil sand is prohibited in Oklahoma, but this department has no knowledge of legal impediments in any other state. A U. S. Bureau of Mines report on "Effects of Extraneous Gas on the Production of Oil Wells in the Lyons-Quinn Field of Oklahoma," by Kirwin, Rison and Wardwell, contains suggestions regarding regulation of the flow of extraneous gas into an oil sand for the benefit of operators in states where the practice is permissible.

The report points out that the first consideration in the use of extraneous gas from a gas sand moving into an oil sand to increase the production of oil should be the regulation of and control of input gas. Otherwise large quantities of gas may be wasted. In fields such as the Quinn dome, where gas sands lie below the oil sand, a gas well could be used as a key well for introduction of the gas into the oil sand. In such a key well a string of casing should be cemented or securely landed above the productive oil sand. Another string of casing should be cemented below the oil sand and above the gas sand. These two strings of casing should be bradenheaded and connected with pipe of suitable size. Gas then could be conducted to the surface through the "gas string" and returned to the oil sand between the gas string and the next outer or "oil string" of casing. A gate, regulator and meter could be placed in the connections between the gas string and the oil string, and the flow of gas to the oil sand measured and regulated. In cementing the gas string care should be taken not to allow cement to cover the oil sand or to cement the gas string and oil string together.

In fields where gas sands lie above the productive oil sands it would be necessary to produce gas from a gas well and to use an oil well to introduce the gas into the oil sand unless bradenheaded gas was produced and conducted to the oil sand through the oil string. By a system of plugging it would be possible to allow gas from a gas sand either above or below an oil sand to migrate to the oil sand through open hole, although the flow of gas to the oil sand could not be regulated. It also would be possible to perforate casing opposite an upper gas sand and allow gas to migrate downward through the casing to an oil sand or, in the case of a gas sand below an oil sand, perforate the casing opposite the oil sand and allow gas to migrate up through the casing and into the oil sand through the perforations. However, none of these plans to allow gas to migrate into an oil sand without regulation at the surface could be considered good practice.

WHY THEY CALLED IT *Lost Circulation*

When the driller speaks of circulation he usually is referring to the movement of mud fluid down through the drillstem and then up to the slushpit beside the derrick in the process of rotary drilling. Sometimes the downgoing fluid fails to reappear at the surface. So the self-explanatory term "lost circulation" has come into use. The fluid may be escaping into an underground fissure or into a formation of extraordinary permeability. Days have been spent in pumping thickened mud or mud mixed with fibrous material, straw or cottonseed hulls in an effort to restore circulation. In one California well more than 50 tons of miscellaneous material was pumped into the hole over a period of two weeks without regaining the lost circulation. There have been many similar cases.

Why Application of Vacuum Results in Increased Production of Oil

I would like to know something about the application of vacuum to oil wells as a means of increasing recovery. May I ask you to explain the principle of the vacuum for me and to tell briefly how it works in practice? Is it the best practice to use guy-wires on derricks?—G. W. O.

The efficacy of vacuum in increasing oil recovery is based on the fact that an increase in the differential pressure between the oil stratum and the well may be obtained either by reducing pressure within the well or by increasing the pressure within the oil reservoir. Reduction of pressure in an oil sand releases more gas from solution and permits greater expansion of the gas. Consequently, reducing the pressure at the well below atmospheric by a gas pump provides additional expulsive forces in the sand not available before. Gas pumps are placed on wells after the production has declined to a very low figure and the gas pressure is only slightly above atmospheric pressure; hence, the reduction of pressure ordinarily affected by the gas pump is not more than 15 to 20 inches of mercury. The barometric pressure decreases as the altitude above sea-level increases. Consequently, a vacuum of, say, 10 inches of mercury at a high altitude, such as that of the Salt Creek oil field of Wyoming where the normal atmospheric pressure is only 12.3 pounds (25 inches of mercury), is a considerably lower pressure than a 10-inch vacuum applied in the Salt Lake field of California, where the wells are situated but a few feet above sea level. The maximum vacuum practically attainable in oil-field operations is about 12 pounds, or 25.5 inches of mercury. Such a negative pressure is unusual, however, in practical operations, and minus 7 or 8 pounds (14 to 16 inches of mercury) is a better average working figure.

It is obvious that when the natural gas accompanying the oil has been exhausted, the practical limit of efficiency of the gas pumps has been reached so far as increasing the production of oil is concerned. L. C. Uren writes as follows on how vacuum works:

"Evacuation of the gas and vapor from the oil-drained spaces, together with the reduction in pressure causes a large part of the high vapor-pressure components of the oil to escape from these surface films. Large volumes of gas and vapor, so liberated, sweeping through the pore spaces of the sand toward the outlet wells carry considerable oil along through the drainage channels, and thus the recovery of oil as well as that of gas and condensable vapor is increased.

"It should be remembered that the gas energy brought to bear in driving oil from a sand is a product of both the pressure and the gas volume. In the vacuum process the increase in pressure is slight, but the increase in gas volume may be large; hence, the energy thus made available for moving oil is proportionately increased. In one sense, the vacuum process is comparable with the air or gas-drive methods of recovery, in that the additional production secured is primarily due to the passage of gas flowing under a pressure differential through the reservoir sand toward the well outlets."

A derrick built on proper engineering lines is supposed to be self-supporting, but many operators prefer to guy them to nearby stationary objects on the ground or to "deadmen" of timber, steel or concrete buried in the earth, usually about 150 feet from the derrick. From 8 to 24 guy-wires are employed, 2 to 6 being fastened to each derrick leg.

FIELD OPERATIONS

Summarizing the Week's Developments

A falling off in completed wells in the United States was noted last week due partly to the Independence Day holiday. A total of 492 wells completed was 45 fewer than the previous week's record.

KANSAS

Two discovery wells were completed in Ellis County and one in Ellsworth County, Kansas, in the past week. Wildcatters are extending their operations in mid-northern and western Kansas. A deep test is to be drilled in Lincoln County, north of Ellsworth County.

OKLAHOMA

Production in Oklahoma was cut to 508,600 barrels in the past week with the Oklahoma City field reduced to a daily average of 106,600 barrels per day. The southeast trend of the Jesse field in Pontotoc County is due for a shallow drilling campaign following the discovery of oil in sand at 790-820 feet, yielding an estimated 50 to 100 barrels initially. The production was passed up and the discovery well is drilling deeper.

NORTH LOUISIANA

The possibility that the Middle Trinity may be found productive over a large part of North Louisiana is interesting operators in that division. A drill stem test in a well in Lincoln Parish showed a potential production of 70,000,000 feet of gas and some distillate from the Travis peak, lower member of the Middle Trinity. Eight routine completions were reported from the Rodessa field of Caddo Parish, Louisiana, and Cass County, Texas.

GULF COAST

Three wildcat dry holes in the Texas Coastal area were overlooked when a Trinity sand test in northern Houston County showed possibilities of oil production. The wildcat indicated a production of 30,000,000 feet of gas with a little distillate in a short drill stem test.

WEST TEXAS

Gaines County has been added to the Permian Basin oil region counties. The discovery well is not a large one, and may be drilled deeper in search of higher porosity in the lime.

EAST CENTRAL TEXAS

Good showing of oil in a test in Hopkins County in the Paluxy sand of the Trinity series caused much excitement and a rush to purchase any acreage that might have been left over from the leasing campaign that began when the test was started.

CALFORNIA

The recent discovery of oil in the Stevens district, Kern County, started a leasing campaign which has resulted in tieing up 50,000 additional acres in California. Northern counties are being combed for gas structures and many leases have been blocked following gas discoveries.

WYOMING

It is estimated that 2,500 acres of Sundance sand was proven for oil in the Lance Creek field in Niobrara County, Wyoming, when Continental Oil Company's wildcat showed oil in the Sundance adding about 800 proven acres to the field.

Stocks of Crude Petroleum

(United States Bureau of Mines)

GRADE OF CRUDE OIL—	June 20, 1936	June 13, 1936	June 22, 1935
Pennsylvania Grade	4,247,000	4,297,000	4,804,000
Other Appalachian	885,000	917,000	897,000
Lima-N. E. Indiana-Michigan	1,290,000	1,323,000	1,218,000
Illinois-S. W. Indiana	10,290,000	10,314,000	11,570,000
N. Louisiana and Arkansas	10,690,000	10,609,000	10,388,000
West Texas and S. E. New Mexico	28,615,000	28,896,000	31,174,000
East Texas	21,064,000	21,164,000	29,769,000
Other Mid-Continent	125,701,000	125,913,000	146,457,000
Gulf Coast	28,927,000	28,720,000	23,614,000
Rocky Mountain	26,444,000	26,423,000	27,363,000
California	34,631,000	34,518,000	30,511,000
Foreign	2,660,000	2,549,000	4,015,000
Total reported weekly	295,444,000	295,643,000	321,780,000
Estimate of unreported stocks	16,900,000	16,900,000	14,000,000
Total stocks	312,344,000	312,543,000	335,780,000

Outstanding Fields—Highlights

(Week Ending July 4)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Anahuac	1	10	2	1,200	91	8,532
Hastings	3	5	2	1,306	79	7,435
Loma Novia	4	9	6	1,510	514	15,300
Seven Sisters	4	10	7	3,510	227	6,540
Saxet Heights	5	14	2	440	114	7,910
Saxet	5	29	8	1,580	148	11,300
East Texas	73	188	54	2,095	20,913	429,350
Talco	3	33	1	900	13	1,750
OKLAHOMA						
Oklahoma City, Capitol area	7	63	13	26,744	89	32,860
Oklahoma City, old field	0	1	0	0	971	73,840
Fitts	10	60	5	4,259	389	43,650
Burbank-S. Burbank	1	16	2	1,788	2,146	21,925
KANSAS						
Ellis County	3	31	3	1,412	31	1,297
Reno County	4	21	5	3,802	289	13,694
Rice County	7	39	4	4,087	488	31,472
Russell County	9	49	1	200	434	14,468
NEW MEXICO						
Lea County	14	73	18	12,749	863	69,230
LOUISIANA-TEXAS						
Rodessa, La.	6	43	7	3,108	216	57,185
Rodessa, Tex.	4	11	1	720	19	4,875
Gillis, La.	1	4	0	0	43	15,596
Tepetate, La.	2	2	0	0	19	4,137
MICHIGAN						
Porter-Yost	5	15	3	335	388	20,603
Crystal-Montcalm	6	16	0	0	134	7,005

Completions in All Fields

(Week Ending July 4, 1936)

	Oil	Gas	Dry	Ttl.	1936 Total comp. to date	1935 Total comp. to date
Penna. Grade Fields	35	13	8	56	1,460	1,437
Lima Field	0	0	0	0	31	50
Central Ohio	0	3	3	6	145	221
Indiana	0	0	0	0	77	101
Illinois	0	0	0	0	11	9
Michigan	4	7	1	12	277	229
Kentucky	10	0	2	12	111	114
Kansas	20	2	6	28	786	590
Oklahoma	49	2	10	61	1,245	928
North Central Texas	28	0	25	53	1,387	1,093
West Texas	18	0	3	21	689	384
Texas Panhandle	8	0	8	16	350	329
East Central Texas	5	0	2	7	142	123
East Texas	54	0	1	55	1,410	2,553
East Texas border	1	0	0	1	23	5
Gulf Coast—Texas	21	0	5	26	572	518
Southwest Texas	38	4	14	56	1,452	680
Total Texas	173	4	58	235	6,025	5,685
North Louisiana	9	1	3	13	322	145
Gulf Coast—Louisiana	3	0	3	6	196	198
Total Louisiana	12	1	6	19	518	343
Arkansas	1	0	5	6	48	77
Montana	9	2	1	12	105	66
Wyoming	2	0	0	2	42	27
Colorado	0	0	0	0	14	8
New Mexico	19	0	0	19	289	169
Utah	0	0	0	0	4	4
California	18	0	6	24	606	548
Total U. S.	352	34	106	492	11,794	10,606
Total previous wk.	370	51	116	537	.....	.....
Difference	18	17	10	45	.....	.....

Southwest Texas District

HEAVY RAINS RETARD WORK; OIL SHOWINGS IN WILDCATS

By GEORGE WEBER

SAN ANTONIO, Tex., July 6. — Further showings of new production in Southwest Texas held the spotlight during the past week, as heavy rains slowed general operations throughout the section. A definite showing of oil in the Nueces County wildcat, M. F. Hurlburt No. 1 J. O. Phillips, pending completion of Rogers & Rogers No. 1 Pena in Duval County, and indications of new production in Goliad and Zavalla Counties directed interest to those four widely separated spots.

The Hurlburt wildcat, located in section 8 of the Flour Bluff Garden Tracts near Laguna Madre and the site of the old Don Patricio Causeway to Padre Island, made a good test late in the week. From a total depth of 7,504 feet, the wildcat was plugged back and 7-inch casing was set at 6,753 feet. Through perforations at 6,633-43 feet, a drill stem test was made, using 1,000 feet of water as a cushion against high pressure. In 15 minutes the water cushion was unloaded and the well sprayed oil. Recovery was 750 feet of oil and 180 feet of drilling water. The oil showed a gravity of 46 degrees at 87° F. A notable feature of the test was the absence of salt water. Operators will probably perforate five more feet before completing the well. The test was begun in March and has attracted attention since the latter part of May when it encountered saturation at about 6,630 feet. Operators are now confident of the opening of a new field in the area.

In southwestern Duval County, Rogers & Rogers No. 1 Pena, a wildcat, is being completed. The test cored saturated sand at 2,850-62 feet and set casing at 2,845 feet. Casing was shot at 2,783-95 feet and the test was flowing about 50,000 feet of wet gas, together with about 15 to 20 bbls. of high gravity oil, at the latest reports. Operators may perforate higher to obtain gas to lift the oil. The production is reported coming from one of the Bruni sands, and the crude corresponds to some of that produced in the Bruni field. This is also conceded to be the discovery of a new field.

Although less advanced than the two preceding tests, the Zeni Oil Co. No. 3 Lutenbacher, wildcat south of the town of Goliad, Goliad County, has set casing at 5,352 feet and is expected to make a well early this week. Top of the Pettus sand was cored at 5,365 feet and saturation was cored for several feet. The No. 3 well is located 1,500 feet southeast of the company's No. 1 Lutenbacher which showed for a gasser recently but was abandoned.

In another area of Southwest Texas, a fourth wildcat was showing strong indications of opening new production. Bay Oil Co. No. 1 National Bank of Commerce, in section 43, southeastern Zavalla County, was standing with 2,500 feet of oil in the hole. Bottomed at 6,585 feet, the test was plugged back to 6,252 feet. Tubing was run to test broken chalk, and operations were interrupted when the swab was lost in the hole. Operators plan to shoot the well to bring it in. This test is expected to open new production in the Fault Line zone. It will have a stimulating effect on the wildcatting which has begun in the area, along the trend of the Pearsall field.

Farther to the east, the Atascosa Trust Co. No. 1 Domsch is drilling 50 feet deeper from its former total depth of 3,624 feet before again attempting completion. The test, located north of the town of Poteet in Atascosa County, has encountered shows of oil since early May.

Heavy rains and attending floods generally hampered operations throughout the section over the past week, and completions in the proven areas are unusually low. Important extensions were made, however, in the Saxet and Seven Sisters fields, and failures defined other fields.

Saxet Field

In Saxet, eight oil producers were completed; most of which were bottomed in the Frio sand at 5,800 feet. Of these, one constituted an important extension to that sand. Lonnie Glasscock No. 1 Glover Johns, located in the southwest corner of a 20-acre tract, in the McGregor Survey No. 582, extends production in the 5,800-foot sand to the northeast.

A new sand in the field was also opened to production. The sand, to which little importance is attached by field operators, was found in the Coastland Oil Co. and Keystone Royalty Co. No. 1 Page Brothers, a workover test. The well is located about 2,000 feet west of production, and found salt water in the regular 5,800-foot sand. The hole was plugged back to sidetrack, and a sand at 5,741-58 feet tested "gasoline" and mud. It was completed during the week making about 10 to 15 bbls. of distillate per day through a five-thirty-seconds inch choke with tubing pressure of 2,150 pounds and casing pressure of 2,200 pounds.

Ten tests in the Saxet field are now on, or approaching the 5,800-foot sand, the horizon which has been responsible for the field's recent increase in activity. A few of these are running low, and may mark limits to the sand. The deep test, Conroe Drilling Co. No. 1-B Rand Morgan, which failed to find production in the 5,800-foot sand, will probably be abandoned. It tested distillate and mud in a deeper sand at 6,293-6,308 feet, but showed salt water later.

The 4,400-foot sand, second in importance from the standpoint of field activity, is about to receive an extension. Gilcrease Oil Co. No. 1 Sullivan, Thomas Gallagher Survey, 1,500 feet south of Clarkwood, tested 1,750 feet of oil in the 4,400-foot pay. It will extend that sand to the south nearly 1,500 feet if completed as a producer.

The Saxet Heights field was relatively quiet during the week, with only two completions, and one failure. Houston Oil Co. abandoned No. 1 McBride in the southwest section of the field after salt water was found in the field sand at 4,091-96 feet.

Aransas County

The Aransas Pass district, which was brought into prominence in April when Buckingham Oil Co. No. 1 McCampbell blew out as a gasser, is again being developed. The Buckingham test, located in Aransas County, has removed much of the drill stem which was stuck in the hole, and is drilling in a sidetracked hole below 5,200 feet. Offsetting this test on the northwest, Atlantic Oil Producing Co. No. 1 Maryland Trust Co., located across the line in San Patricio County, is drilling below 3,200 feet.

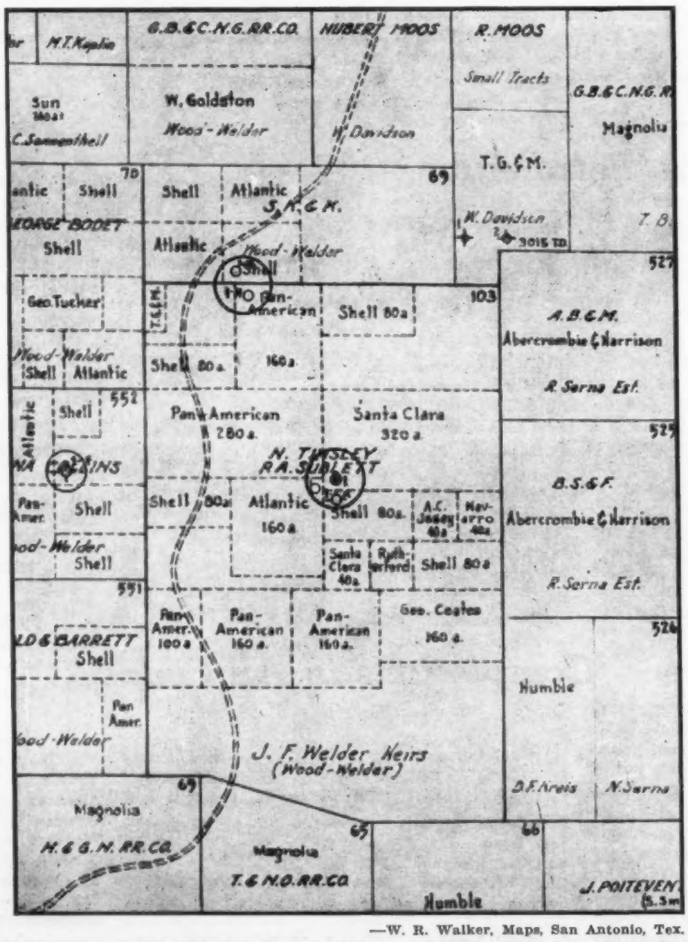
Laredo District

The Laredo district continued to slump in activity. The Lopez field, potentially one of the most important in the district, received another gasser in the northeastern part. Magnolia Petroleum Co. No. 2 Peal, one location north of the No. 1, was completed as a gasser spraying oil, and is expected to be an oil producer. In this section of the field, two other tests are drilling, and additional operations are expected to get under way shortly.

Seven Sisters

Seven Sisters, in Duval County, was defined on the southwest by the

(Continued on Page 72)



—W. R. Walker, Maps, San Antonio, Tex.

Loma Vista, a one-producer field discovered several miles east of Loma Novia last year by the Santa Clara Oil Co., is again getting some development. Two tests are starting north of the discovery well by Pan American and Shell. Two dry holes have been drilled in the vicinity of the field by Shell and Atlantic

"What does a Bank Statement of Condition Show?".....

Bank statements are divided in two parts, "Resources" and "Liabilities".

The most important item in the statement is the amount the bank owes to depositors. The next, in importance, is the assets the bank has to meet these obligations to depositors.

The chief debt of a bank is the amount of deposits of its customers. Its chief resources for paying these debts are usually cash, deposits in other banks, loans, government bonds and other readily marketable securities.

A bank's next obligation is to its stockholders for the money they have invested in the ownership of the bank. This item is listed on a bank statement as "Capital". Capital, surplus and undivided profits constitute added protection to depositors.

Statement of Condition June 30, 1936

RESOURCES

Cash and Due from Banks	$23,911,990.52	
U. S. Government Securities	16,670,722.02	
Other Bonds and Warrants	4,542,141.51	$45,124,854.05
Loans and Discounts		15,569,555.26
Overdrafts		3,375.76
Income Receivable Accrued		161,882.11
Stock in Federal Reserve Bank		240,000.00
Investment in Bank Premises		2,251,000.00
Customers' Liability under Acceptances		5,393.25
TOTAL		$63,356,060.43

LIABILITIES

Deposits		$54,618,680.95
Acceptances Executed		5,393.25
Income Collected not Earned		61,768.75
Interest, Taxes, etc., Accrued		66,071.34
Capital—Preferred	$ 4,000,000.00	
Capital—Common	2,000,000.00	
Surplus	2,000,000.00	
Undivided Profits and Reserves	604,146.14	8,604,146.14
TOTAL		$63,356,060.43

COMPARATIVE DEPOSITS

June 30, 1933	$27,517,143.20
June 30, 1935	40,250,985.50
June 30, 1936	54,618,680.95

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Michigan Field Report

By
PAUL A. ELLIOTT

SHORTAGE OF MICHIGAN OIL SERIOUSLY FELT BY REFINERS

MUSKEGON, Mich., July 6.—Spurred on by the highest crude prices in four years and the insistent demands of independent refineries, several of which are seriously suffering from lack of oil, Michigan operators last week turned their attention to wildcat oil tests in every section of the Lower Peninsula.

Fully a dozen such tests were drilling in or nearing possible pay horizons during a week when new initial oil production in existing fields dropped to an alarmingly low point of less than 500 bbls. from four completions.

As has been the case for several months, oil completions were dwarfed by seven new gassers adding 190,000,000 feet of daily potential to the Tri-Townships field, now credited with about 80 per cent of the state's aggregate open-flow potential of nearly 3,500,000,000 feet.

Wildcat Prospects

North, south, east and west—wildcats were drilling for oil supported by the good wishes, and in several cases the dry-hole money not only of independent operators but also of the majors represented in Michigan.

The only one as yet recording a promising show was Dr. Virgil R. D. Kirkham No. 1 Boyce Farm Co., SW SW NW section 24-14n-7e, Wisner Township, Tuscola County, in which water had been encountered at near 2,900 feet. Operators planned to plug back to test a 10-bbl. show about 264 feet in the Dundee, with acid. The hole was drilled about 290 feet below the Dundee limestone top before striking water.

Another northeastern Michigan test drilling far in the Dundee without a showing was A. H. Weber No. 1 DeLong, SE SE SE section 35-16n-3e, Garfield Township, Bay County. The drill had penetrated nearly 150 feet into the lime without success.

Several miles westward toward the center of lower Michigan but about the same northerly range as the Weber-DeLong, Fortney Oil Co. No. 1 Neville, SE SE NW section 19-17n-3w, Sheridan Township, Clare County, was reported nearing the Dundee more than 3,600 feet deep. Reports of favorable structure have attracted attention.

On the other side of the state, a northwestern Michigan test being drilled by Charles W. Teater, the independent operator who opened the state's largest oil field in Porter Township, Midland County, in 1933, also neared the Dundee in his No. 1 McCabe estate test, NE SW SW section 26-20n-12w, Newkirk Township, Lake County, at more than 3,100 feet deep. Several operators holding leases in this section are eagerly awaiting the outcome.

Although not deep enough as yet to attract much attention, Mr. Teater No. 1 Nevins test in Long Rapids Township, Alpena County, started with 22-inch casing, the largest in Michigan, also is considered an important wildcat in northeastern Michigan.

In central Michigan several wildcat and semiwildcat tests were nearing possible production and claiming their share of attention.

Harley Williams' No. 1 Smith, SE SW NE section 28-9n-2w, a Washington Township test in Gratiot County, was shut down at about 2,800 feet awaiting casing.

W. E. Voss No. 1 Bristol, SE SE NW section 23-10n-8w, Montcalm Township and County test, also was ready to be cased before drilling into the Dundee in the vicinity of the Vickeryville discovery well, which has not yet developed the field to importance anticipated last fall. It is several miles north of Greenville.

One Dry Hole

The only dry hole of last week brought disappointment in this area when the Jetter Oil Co. and Oil Finders, Inc., No. 1 DeHart, SW NE NE section 1-9n-6w, Bushnell Township, Montcalm County, struck water at about 3,190 feet, in the Dundee. It will be abandoned as the fifth failure in several months drilling near Vickeryville.

Morris Oil & Gas Corp. No. 1 Young, SE SE SW section 36-10n-6w, Evergreen Township, Montcalm County test, shut down at 2,200 feet to await the outcome of the DeHart test, also may be abandoned.

Though a failure in the Traverse and Dundee, the Terry Dale Michigan Corp. No. 1 Tew, SW SW NE section 12-6n-7w, Berlin Township, Ionia County, is still drilling to test the Monroe at more than 3,350 feet deep.

A Dundee test which failed to find any Michigan Stray near Big Rapids but struck the Marshall comparatively high last week was Frank V. McCollister No. 1 Mary Joass, SE NE SE section 8-15n-10w, Big Rapids Township, Mecosta County. It was to be cased at about 1,400 feet to continue for oil.

Despite a show of gas in the Michigan Stray, J. W. Bernier No. 1 Fitzgerald, NW NW SE section 9-13n-9w, Deerfield Township, also Mecosta County, was cased at 1,620 feet and is drilling on for oil.

Two western Michigan wildcats also were nearing completion in the Dundee, one in Muskegon County and the other in Mason.

The former was Jacob Bolema and the Overland Petroleum Co. No. 1 Mary Bolt, SE NW SE section 10-10n-13w, Casnovia Township, which had been drilled to about 2,750 feet Friday with no water in the hole from the upper or lower Traverse. It was reported more than 50 feet in the Dundee.

The other was the Northern Development Co. No. 1 Fred Burke, SW SE NW section 26-17n-15w, Logan Township, Mason County, drilling in the Dundee limestone without success at more than 2,550 feet.

Jacob Bolema No. 1 Red Wing Development Co., NW NW NW section 15-21n-16w, Manistee County, also was on the way to the Dundee after failure in the Traverse.

Michigan Oil Exploration Co. No. 1 Croff, NE SW SW section 35-7n-9w, Vergennes Township, Kent County, was being deepened below the Traverse, Dundee and Monroe into the Sylvania, near Lovell, at more than 3,800 feet deep.

Gassers

Seven new gas wells in the Michigan Stray sands increased the Belvidere-Montcalm and Millcrook-Mecosta sections of Tri-Townships field by 118,000,000 and 72,000,000 feet, respectively, last week.

Frank Davis No. 2 Joseph Bloomfield, C SE NW section 5-12n-7w, Belvidere Township, Montcalm County, made the heaviest open flow of 47,000,000 feet daily.

Midland Petrol & Gas Co. No. 1 M. Dawes, C SW NW section 5, Belvidere, came in at the rate of 37,000,000 feet. The third new gasser in Belvidere was Hyatt & Norton No. 1 I. Dawes, C SE SE section 5, which gauged 34,000,000 feet.

Wolverine Natural Gas Co. No. 1 Lambert, C NW NW section 11, same township, struck the shallow gas high but had not yet been completed. It was good for more than 2,000,000 feet.

Bundy Hill Natural Gas & Oil Co. No. 2 Harry Schuberg, C NW NW section 32-13n-7w, Millbrook Township, Mecosta County, flowed about 39,000,000 feet.

Wiser Oil Co. completed No. 1 James N. Haner, C NE NE section 31, same township, for a flow of 26,000,000 feet. Refiners Petroleum Co. No. 2 C. and I Miller, C NE SW section 34, gauged 4,500,000 feet. Wiser company No. 2 Oberlin & Howse, C NW NW section 31, Millbrook, made about 2,000,000 feet but was to be drilled deeper.

Midland County

In Midland County three small Dundee producers were completed in Jasper Township and two in Porter and Geneva Townships had oil in the hole and were completing.

Pure Oil Co. No. 3 Frank Sinif, C S half NW NE section 2-13n-2w, Jasper, made about 200 bbls. daily as the largest of the three. Pure B. No. 2 Emma O. Reed, C N half NW SW section 1, Jasper, was rated good for 125 to 150 bbls. daily in the Dundee after acid treatment. Same company No. 1 Mary Tritschler, C N half NW NW section 11, same township, flowed 20 bbls. after acid.

Dibble Brothers No. 1 Harriet Lippert, SW SW NE section 7-13n-1w, Porter Township, drilled into the Dundee with prospects of commercial production not yet gauged.

Joseph Trever No. 1 Forbes, SW SW SW section 22, Porter, was still testing a 5- to 10-bbl. show in the Dundee with the operators planning to deepen the hole.

Brehm-Hollman Oil Corp. No. 1 James estate, NW SW NW section 20-15n-2w, Geneva Township, Midland County, struck oil several feet in the Dundee and started to fill up before casing could be run.

Beaverton—Gladwin

The only other oil completion of the week was M. F. Whitehill No. 1 Mark King, SW SW NW section 2-17n-2w, Beaverton Township, Gladwin County, which made about 100 bbls. a day naturally when drilled into the Dundee as an offset to the northernmost producer in the field.

Crystal-Montcalm

Four tests had been drilled into the Dundee oil sands in the Crystal Township section of the Crystal-Montcalm field, but were not yet reported complete pending further testing, drilling or acid treatment.

Her-Ka-Mon Oil & Gas Co. No. 1 C DeYoung, NE NE NW section 15-10n-5w, Crystal Township, a test south of Duck Lake, was rated good for 15 bbls. a day but waiting a second acid treatment in the Dundee.

Three others filled up with oil when drilled into the Dundee and were being tested. They were: J. W. Leonard, Jr., trustee, No. 2 Norval Brown, SE NW SW section 11, Rowmor Corp. No. 2 Honderich, SW NW NW section 1, and Swanson Oil Co. No. 1 Flint and others, SW NW NW section 11, second test drilled beneath the surface of Duck Lake.

Ogemaw County

Two Ogemaw County tests also had oil in the hole in the Dundee and were to be completed soon.

They were United Drillers, Inc., No. 1 Tiffin, NE NE SE section 19-22n-2e, West Branch Township, and Consolidated Petroleum Producers, Inc., No. 4 Evan Crow, NE NE SW section 36, some township. Five others also were completing in the Dundee in Ogemaw County fields.

Gratiot County

Associated Petroleum Co. No. 1 Yutzey, SE SE SW section 26-10n-4w, New Haven Township, Gratiot County, struck a show of gas in the

(Continued on Page 92)

North Louisiana, Arkansas

MIDDLE TRINITY MAY PROVE PRODUCTIVE OVER WIDE AREA

By MITCHELL TUCKER

SHREVEPORT, La., July 6.—Discovery of another prolific gas zone in the Trinity formation in North Central Louisiana continued to hold the center of interest throughout the week. In this well the Travis Peak (lower member of the middle Trinity) proved to be productive, and affords operators one more objective for future exploratory work in the area. This discovery is thought to be quite significant in that it indicates the possible productivity of the middle Trinity members across the greater portion of North Louisiana.

This late discovery, Brown, Lide & Greer No. 1 Gardner, section 10-17-14, Lincoln Parish, was successful in getting drill-stem test of the section cored to a total depth of 6,576 feet, which showed between 70,000,000 and 80,000,000 feet of gas, carrying some distillate. After standing for cement to set, the well will be fully tested early next week, and it is possible that it will be deepened before completion. Possibly the sand will carry oil as it was reported that the cores taken became considerably darker and more heavily saturated toward the bottom.

Rodessa

Eight oil wells, seven in Louisiana and one in Cass County, Texas, comprised the completions for the week. Work on five new Louisiana wells and two Texas wells was begun. Four permits were issued for additional town-lot locations at Rodessa during the week, but work has not yet begun on them.

Town-lot drilling in Rodessa was somewhat discouraged by the completion of Tri-State Oil & Gas Co. No. 1 Westbrook in Lot 6, Block 12, which only gauged 5 bbls. per hour after acidizing with 3,000 gallons. Only 5 feet of oil saturation was evident in this well. The majority of townsite wells are making gas with comparatively small amounts of distillate, and as there is very little, if any, sale for the gas, the drilling of this type of well is not very attractive.

Activity Will Be Resumed

Drilling in the Rodessa field, which has suffered a minor slump during the past few weeks, is expected to gain momentum during July, as the Magnolia Petroleum Co. assumes control of the R. W. Norton properties. At present this company has five rotary outfits stacked for immediate use, and they will move additional ones from South Texas. It is reported that the Magnolia has let contracts for 10 additional wells, to be begun soon after they take over operation of the Norton leases.

The Louisiana proration order issued June 29 provided for no change in the Rodessa allowable for July, leaving the field to produce 275 bbls. per well per day. Northern Louisiana fields were allotted 75,000 bbls. per day, 55,000 bbls. to Rodessa and 20,000 to remaining fields. An increase of 7,925 bbls. per day over June was apportioned to the entire state. It is improbable that production at Rodessa will be confined to the figure allotted to it, as last week the average daily pipe line runs from the Louisiana side of the field amounted to 56,064 bbls., and additional completions are continually being made to increase the pool withdrawal.

Texas Commission

Abandoning the previous plan to hold a Rodessa hearing at some point in East Texas, the Texas Railway Commission has announced it will include the consideration of this field at its next statewide oil proration and gas conservation hearing, to be held in Austin on July 16. Here it is expected that much of the data recently collected on the Cass County side of the field by commission engineers will be presented. Well spacing, drilling regulations, casing programs, and conservation of reservoir energy will be discussed. Louisiana conservation officials have been invited to attend, Chairman Ernest O. Thompson, of the Texas Railway Commission, said.

Short extensions to the north and west were made this week in Cass County, Texas. The completion of United Gas No. 1 Cunningham, in the Wilson Robinson Survey, extended production about one-fourth mile to the west, while Superior Oil Co. has indications of a producer in its No. 1 Chew, Robert Trammel Survey, located 1¼ miles north of the westernmost well.

Further interest in unleased property to the north of Rodessa was evidenced when Standard Oil Company took an additional 85-acre lease in section 4-23-16, adjoining the Miller County, Arkansas, line. The Standard appears to be well impressed with the structural position of its northernmost well in the field, No. 1 Zylks, which topped the Glen Rose members about 90 feet higher than did other wells a short distance south.

United Gas Seeks Tender

Rumors that the United Gas Public Service Co. would resell their recently acquired Rodessa-Longview pipe line were discounted when that company made application for its first federal tender to transport oil through the interstate line. Latest official daily pipe-line runs for the last week averaged as follows: Standard Oil Co., 20,339 bbls.; Arkansas Pipe Line Co., 5,169 bbls.; United Gas, 3,881 bbls.; Gulf Pipe Line Co., 13,008 bbls.; Leonard Co. (Shoreline), 5,136 bbls.; Magnolia Pipe Line Co., 7,142 bbls.; Texas Pipe Line Co., 1,390 bbls. Daily average for all lines amounted to 56,064 bbls.

The East Texas Refining Co. of Longview secured release of the 50,000 bbls. of oil recently impounded by permanent federal injunction on the grounds that it was produced under "unreasonable orders" on the Louisiana side of the Rodessa field. District Judge W. F. Robinson at Austin, Tex., ordered the State Railway Commission to not interfere with the movement of this oil, or its products, within the state of Texas, holding that the oil was no longer under federal jurisdiction as its future movement would be intrastate. States attorneys took exception to the order for the purposes of appeal.

Production by Pool

Estimated daily gross production all companies week ending July 3:

NORTH LOUISIANA

Bellevue	595
Caddo light	4,085
Caddo heavy	2,360
Converse	950
Cotton Valley	355
DeSoto and Red River	1,415
Elm Grove	430
Haynesville	3,090
Holly	130
Homer	2,550
Pleasant Hill	155
Rodessa	57,185
Sarepta-Carterville	505
Urania	2,830
Zwolle	1,125
Total	77,760

SOUTH ARKANSAS

Champagnolle	2,905
El Dorado	2,130
Lisbon	295
Miller County	975
Nevada	870
Smackover light	2,550
Smackover heavy	17,850
Stephens	585
Urbana	1,865
Total	30,025

Texas side of Rodessa field—4,875 bbls. dly.

Rodessa Completions

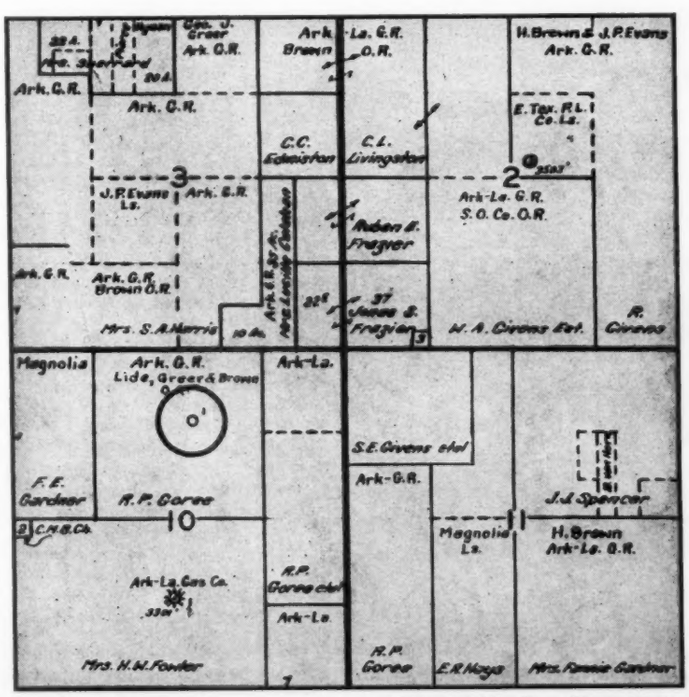
Details of the Rodessa completions for the week follow:

Arkansas-Louisiana Gas Co. No. 13 Rodessa O. & L. Co., section 22-23-16, flowed 22 bbls. per hour initially through one-half inch tubing choke, after topping saturation at 5,970 feet, total depth of 5,996 feet.

Flowing 16 bbls. per hour through one-sixteenth inch tubing choke, R. W. Norton No. 2 Elder, section 23-23-16, was completed at a depth of 6,064 feet, saturation topped at 6,046 feet.

At a total depth of 6,042 feet, R. W. Norton No. 3 Atkins Unit flowed 27 bbls. per hour through one-half inch tubing choke, saturation topped at 6,027 feet.

Magnolia Petroleum Co. No. 3 Foscue Unit, section 29-23-16, topped saturation at 6,000 feet and was completed at 6,010 feet, flowing 21 bbls.



—Walter E. Wylie, Maps, Shreveport, La.

North Louisiana's latest discovery, Brown, Lide and Greer No. 1 Gardner, section 10-17-14, Lincoln Parish, prolific gasser from Travis Peak formation

per hour through three-sixteenths inch tubing choke.

Grady Vaughn No. 2 Hunter-Derryberry, section 14-23-16, flowed 20 bbls. per hour through one-half inch choke on tubing after acid charge of 3,000 gallons. This well was plugged back from 6,024 to 6,014 feet.

Tri-State Oil & Gas Co. No. 1 F. L. Westbrook, situated in the townsite of Rodessa on Lot 6, Block 12, flowed 5 bbls. per hour through one-eighth inch tubing choke, after acidizing with 3,000 gallons. Total depth 6,027 feet. Saturation 5,997 feet to 6,002 feet.

Standard & Gulf No. 17 Lawton, section 14-23-16, flowed 111 bbls. per hour through 1¾-inch tubing choke, from a total depth of 6,024 feet, saturation topped at 5,993 feet. Gas-oil ratio test of this well indicated 676 to 1.

United Gas No. 1 E. J. Cunningham, on the W. Robinson Survey in Cass County, Texas, flowed 30 bbls. per hour through one-half inch tubing choke from saturated section 6,074 to 6,095 feet. Total depth 6,123

DeSoto Parish

E. A. Stiller completed No. 1 Jenkins estate, section 35-13-12, for an initial gauge of 15 bbls. per day on the pump. Total depth 2,490 feet.

L. S. Fite and others No. 1 Ramsey, in section 36-11-11, is being drilled on the strength of previous oil showings obtained by other wells in the lime formation nearby. Cores taken in other wells indicated approximately 40 per cent lime, well saturated, but possibly due to lack of permeability, no "fill up" was noticed. Operators plan to acidize their Ramsey No. 1 upon completion with the hope of making a producer of it.

Bossier Parish

The opening of a new Glen Rose producing area is anticipated soon if expectations prove correct in United Gas No. 1 Skannal, NE NE section 22-17-12, located on the southwest flank of the Sligo field, in Bossier Parish. The well is now coring at 5,050 feet. Saturated gas sand was encountered at about 4,400 feet, which correlated with the Hill zone at Rodessa. This same company continues to do seismograph mapping along the eastern portion of the field. Two other tests with the same objective are in the process of drilling at Sligo. Producers Oil & Gas Co. No. 1 Webb, on the northeastern flank of the field, is reported to be running considerably higher than the United's test.

E. A. Stiller and others of Shreveport has assembled an 8,000-acre block, some containing a stipulation for Glen Rose test to be completed prior to August, 1937.

Bossier Oil & Gas No. 3 Sherrill, section 13-18-12, has been junked and abandoned, total depth of 2,226 feet.

Caldwell Parish

Ziegen No. 6 Louisiana Central Lumber Co., section 18-14-3e, was found to be dry at 1,789 feet and abandoned. Rig was moved a few miles west for the drilling of No. 7, in section 10-12-2e. The completion of No. 6 as a dry hole marks the sixth shallow failure which this operator has drilled on his lumber land in Caldwell and Jackson Parishes.

Seaboard Oil Co. is reported to be planning the immediate drilling of a Glen Rose test on its extensive block centering in section 31-15-5e. The block is made up largely of Southern Advance Bag & Paper Co. land.

Grant Parish

Tri-State Leasing & Development Co. abandoned No. 1 Etheridge at a depth of 3,012 feet, after finding it dry.

Morehouse Parish

United Gas No. 25 Tensas, section 29-22-4e, Monroe gas field, gauged 3,000,000 feet, with 1,020 pounds rock pressure, from a total depth of 2,169 feet, and was completed.

The Gulf Refining Co. added to its holdings in Townships 20, 21 and 22, Ranges 6 and 7, and now has over 50,000 acres in this general area. They have retained all oil rights in the Richland Parish gas field.

Tide Water took a 90-day geophysical option on 57,000 acres in this vicinity recently. Selections are to be made at $3 per acre.

Sabine Parish

At a total depth of 2,116 feet, Circle Oil Co. No. 1 Magness pumped 40 bbls. per day for the completion of another well in the Converse field.

Webster Parish

Arkansas-Louisiana's deepest well, Ohio Oil Co. No. 6 Holloway, section 28-21-10, at a depth of 8,374 feet is waiting the arrival of a string of 7-inch flush-joint casing. It is not known whether the company plans to set this pipe and test the 75 feet of well saturated sand recently cored, or case off the formation and proceed to the 10,000-foot contract depth.

Speculation continues to run high regarding the ultimate potentialities of the structure recently discovered by the Evans-Crichton well in section 35-18-9. Certain companies holding short-time leases have abandoned their previous plans to farm them out, and now plan to develop the properties. Upon completion of the second well, now preparing to spud in, some idea of the structure will be afforded, and some well-informed geologists feel that a test drilled considerably down-dip from the heavy gas area (as was done at Rodessa) may develop a large oil reservoir.

ARKANSAS

Calhoun County

Seven miles east of production in the new Permian lime area of Ouachita County, Ben G. Barnett No. 1 Smith, section 36-15-14, cored salt water in Permian lime from 4,886 to 4,901 feet, and from 4,901 to 4,940 feet dense lime was recovered by coring. Operators are drilling ahead at 5,328 feet, and expect to carry the well to its contract depth of 5,500 feet and abandon it if encouraging indications are not encountered above.

Clark County

Boris Triponoff No. 1 W. Gibbons, section 27-8-18, has been abandoned at 557 feet, after failing to encounter any showings of oil or gas above this depth.

Hempstead County

H. D. Easton and others No. 1 Conway-Tiller, section 20-12s-27w, encountered dense Paleozoic cap material at 2,834 feet, and after difficult drilling to a depth of 2,862 feet it was abandoned.

LaFayette County

Ohio Oil Co. failed to develop any showing of oil in upper horizons, and has abandoned No. 3 Bodcaw Lumber Co. This well now stands as the deepest test ever drilled in Arkansas, and although it proved to be nonproductive, much correlative information was obtained.

Earl F. Fox No. 2 Coleman Brothers, section 30-16-24, was abandoned as dry at 3,760 feet.

Ouachita County

Standard Oil of Louisiana placed second Reynolds lime (Permian) well on the completion list in No. B-3 Reynolds, which flowed 82 bbls of oil and 4,000,000 feet of gas in 24 hours through 11/64-inch tubing choke. Casing pressure measured 1,040 pounds, tubing pressure 840 pounds. Total depth was 4,912 feet.

Five of the other deep tests here are coring and testing. John Pugh No. 1-A Hilderbrand, section 28-15-15, swabbed 100 bbls. of salt water and 50 bbls. of oil before going dry, from a total depth of 4,914 feet.

Indication that Lion Oil Refining Co. of El Dorado is impressed by these tests was given in its recent purchase of a 40-acre tract in the SE SW of section 26-15-15 for a reported consideration of $20,000 and a sizeable sum from the oil runs. On the other hand, Phillips Petroleum Co. is reported to have shut down No. 1 Farriss, section 27-15-15, after rigging up, presumably to await outcome of other nearby tests.

The appearance of increased water in the upper part of the lime section here creates disappointment, and the opinion has been expressed that if Snow Hill is to come up to its original expectations, a lower zone of saturation must be found. This is not an unreasonable expectation, for the Permian lime elsewhere is known to be several hundred feet thick, and to carry from three to five saturated sections.

Union County

Kinnebrow & Simpson No. 1 L. Adams, section 12-17-14, proved to be productive of salt water only, and has been abandoned at a depth of 3,172 feet.

MISSISSIPPI

Mississippi state officials are re-

(Continued on Page 92)

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Among Gulf Coast Drilling Contractors

George Echols has apparently opened a new field in Nueces County, Texas, for S. F. Hurlburt and others due to the showing of their No. 1 Phillips which tested 750 feet of oil on a drill-stem test at a plugged-back depth at 6,633-43 feet. The new strike is located south of Corpus Christi on what is known as the Flour Bluff area. Mr. Echols has several rigs running in the lower Gulf Coast and is very familiar with the subsurface conditions in this section of the state.

Ben (Bud) Coyle, who developed the Jeanerette field in St. Mary Parish, Louisiana, for the Herton Oil Co., is rigging up a wildcat for Harry C. Hanszen, 4½ miles east of the field. He has completed six producing wells for the company and has opened three producing horizons for the field.

C & C Drilling Co. spudded No. 2 Williams, South Houston field, for Dick Schwab, and is drilling below 1,800 feet on No. 1 Helberg & Lackner, located at the Eureka Heights prospect northwest of Houston in Harris County. It is being drilled for the Houston Oil Co. and others.

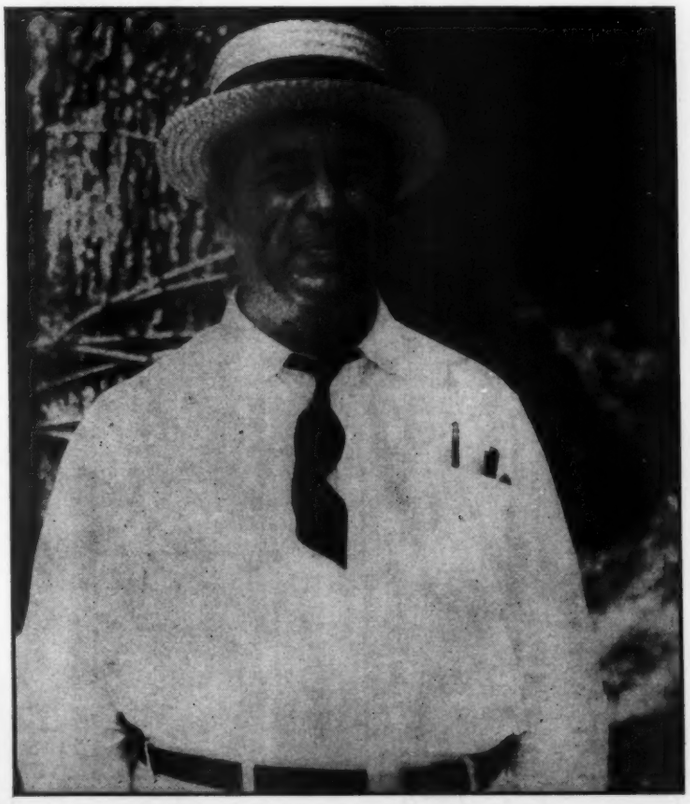
Nicklos Drilling Co. has reached the 8,300-foot sand at Tepetate, in Acadia Parish, Louisiana, on Continental Oil Co. No. 1 Fruge and is preparing to test after cementing casing on bottom. No. 5 United Land has been spudded at the Sorrenton dome in Ascension Parish for the Pan American Production Co., and for the same company at Port Barre, No. 2 Cormier is sidetracking at approximately 3,600 feet.

Harry Edwards, of the Edwards Drilling Co., has opened up production for himself in the Pickett Ridge field by the completion of No. 1 E. D. Farmer, which was completed for a good producer at a total depth of 4,702 feet. A rig is being moved to the Dickinson field in Galveston County for the Kenben Oil Co.

Glenn H. McCarthy is moving in rig in the Cotton Lake prospect in Chambers County for No. 1 Kilgore, northwest of a dry hole recently drilled by the Salt Dome and Gem Oil companies that showed possibilities of commercial production. No. 1 Langham, in Amelia field, is coring below 5,000 feet, while at the Anahuac field for Humble Oil & Refining Co., No. 2-B White and No. 12 White are drilling ahead below 2,500 feet.

Rutherford Drilling Co. has reached the 8,200-foot sand in No. 1 Langham, in the Van Vleck field, for Skelly Oil Co. and is preparing to test. This will be the second well to be completed in this sand as the majority of the wells are producing from a 7,400-foot sand. No. 7-B Cobb is bottomed in oil sand at 7,495 feet and 7⅝-inch casing has been ce-

(Continued on Page 91)



Al Whitman, Houston contractor, who is drilling a deep test for Steinberger Petroleum Corp. in the old Edna gas field, Jackson County. The test, No. 1 Drushel, will be taken to the Frio in exploration for oil. All production at Edna to date has been gas from shallow sands. Mr. Whitman is a contractor of many years' operating experience, part of which has been in Venezuela

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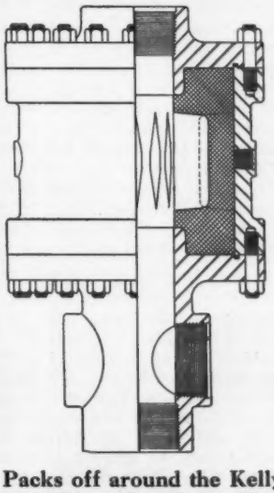

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Texas and Louisiana Gulf

By F. L. SINGLETON

WOODBINE SAND PROSPECT, NORTHERN HOUSTON COUNTY

HOUSTON, Tex., July 6.—With production tests proving disappointing on three wildcats situated along the Gulf Coast, interest has shifted inland to northern Houston County where Ellison & McBride No. 1 Bean, E. Stedman Survey, approximately 1 mile north of the town of Grapeland, has shown possibilities of opening production from the Woodbine sand. The sand section was topped at 6,025 feet, and on a four-minute drill-stem test from 6,028-38 feet, total depth, it showed 30,000,000 feet of gas and 2 gallons of distillate through a three-eighths inch choke. At the close of the week the operators were taking another core and were scheduled to make a second test.

The well is midway between the Long Lake field in Anderson County and the Buffalo area in Leon County. No. 1 Bean is on a block of 5,000 acres farmed out by Empire Gas & Fuel Co. A brisk leasing campaign took place shortly after the well found the sand, but it has quieted down to some extent awaiting the outcome of the test. Protection acreage is held by numerous companies.

Sun Oil Co. No. 1 Hughes, discovery well of the Green Lake prospect, southwestern Galveston County, has been abandoned as a failure and the rig is being moved to No. 1 Houston farm, to the south in the D. Buckley Survey. When the well was tested it flowed 250 bbls. of fluid of which 30 per cent was salt water through a quarter-inch choke. The pressure built up to 1,250 pounds and it started flowing sand and salt water. The fate of this area hinges on the outcome of the company's No. 2 Hughes, located 933 feet northeast, which is coring below 3,000 feet.

At the Hawkinsville dome, Matagorda County, the same company No. 1 Craig, on the east flank in the Thomas Williams Survey, was swabbed dry at its original perforation depth from 5,150-75 feet and the operators have perforated the casing from 5,150-60 feet and were preparing to test again. If the test fails, the hole will be plugged back, sidetracked and redrilled to the Miocene sand.

In the Willis area, northern Montgomery County, W. O. Bilnoski and others No. 1 J. W. Wood, northwest of the town of Willis in the William Weir Survey, failed to make an oil well at its original depth of 3,757 feet, and the hole is being plugged back to 3,720 feet. It will be underreamed to 3,740 feet, at which depth another test will be made. When tested it flowed wet gas and a small amount of salt water through a quarter-inch choke, with tubing pressure 450 pounds and casing pressure 850 pounds. This is the third well to show commercial possibilities from the Conroe sand which is expected to lead to further development.

Prospective Field

Prospects of the Heyser field in northwestern Calhoun County of becoming a field of major importance was shown by Humble Oil & Refining Co. No. 2 Welder, which showed 320 feet of oil and 90 feet of mud on a 15-minute drill-stem test from 5,454-73 feet, the total depth. Seven-inch casing is being cemented on bottom and it is to be tested during the week. It is located approximately 6,100 feet southwest of the company's discovery well and encountered the sand at approximately the same depth. Location is the Jose Maria Rios Survey.

Stanolind Oil & Gas Co. No. 4 State, on the north bank of the Dickinson Bayou, Dickinson field, Galveston County, was completed at a plugged-back depth of 8,050 feet for an initial production of 207 bbls. in 20 hours through a quarter-inch choke, with tubing pressure 526 pounds and casing pressure 1,600 pounds. Seven-inch casing was cemented at 7,980 feet. The company's No. 5 State, south of Humble Oil & Refining Co. No. 1 Townes, is bottomed at 9,160 feet and 7-inch casing was cemented at 7,972 feet.

Two wells are in the process of completion by Skelly Oil Co. in the Van Vleck field, Matagorda County. No. 1 Longham cored oil sand from 8,243-48 feet, the total depth and casing is being cemented preparatory to testing. If productive it will be the second producer to be completed in this sand. No. 7-B Cobb topped oil sand at 7,469 feet and cored to 7,495 feet, total depth. Seven and five-eighth inch casing has been cemented on bottom. The two wells are located in the M. Cummins Survey.

Victoria County

Three completions were recorded for the Placedo field, Victoria County. Eastern Texas Petroleum Co. No. 2 Hosek flowed 220 bbls. per day through a quarter-inch choke from a depth of 4,778 feet; Haynes B. Ownby No. 1 Malek made 225 bbls. per day from oil sand bottomed at 4,772 feet and Superior Oil & Gas Co. No. 2-B Henderson & Pickering flowed 10 bbls. per hour through a quarter-inch choke from a depth of 4,785 feet.

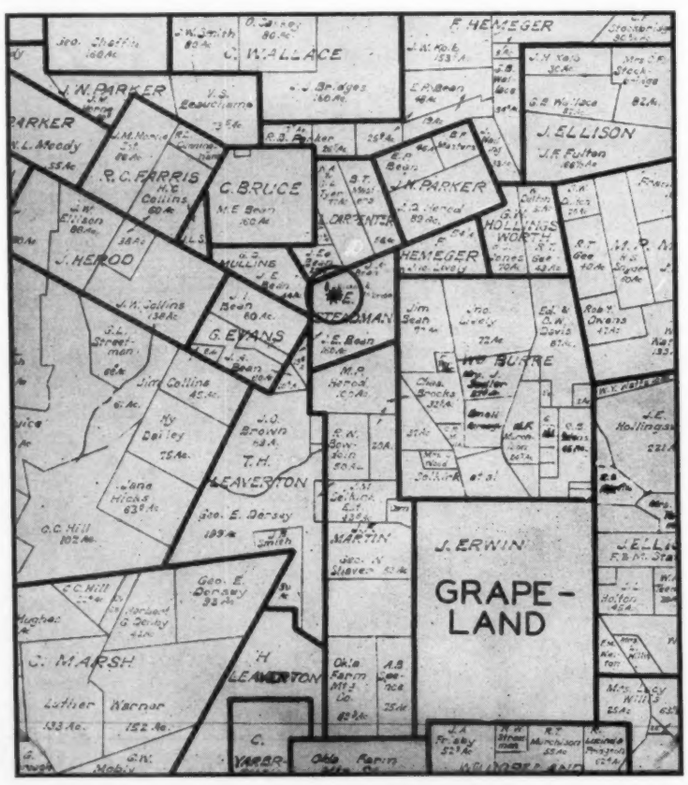
Texas Co. No. 3 Freeport Sulphur Co. on the Bryan Mound dome, Brazoria County, topped salt at 5,555 feet and is shut down in salt at a depth of 5,954 feet.

New Test on Nome Prospect

A new wildcat location for the Nome prospect, Jefferson County, was announced by M. C. Lucky and others for No. 1 C. T. Garth. It is 438 feet from the east line and 248 feet from the north line of Lot 24 in the Alex Horton Survey, approximately 4,000 feet north of Shell Petroleum Corp. No. 1 Carpenter which is drilling for the Frio sand below 6,501 feet, after encountering showings of oil and gas in the Marginulina sand. To the west, Sun Oil Co. No. 1 Long, which tried to blow out last week from a gas sand topped at 8,737 feet and bottomed at 8,750 feet, is drilling ahead in sandy shale below 9,000 feet.

Smith & McDannald No. 1 Priesmeyer, located in the Lakeview area, Wharton County, has been abandoned at 6,615 feet after an electrical coring test showing nothing of importance. Gas showings were encountered in shale breaks from 6,588 to 6,606 feet. It is a half mile northwest of the same operators' No. 1 Mitchell, recently completed for a dry gas well at a plugged-back depth of 3,283 feet.

National Petroleum Corp. No. 1 St. L.B.&M., located in the heart of the Greta field, Refugio County, and on the railroad right of way of the Missouri Pacific Railroad, blew out and caught fire after penetrating a highly charged gas sand just above the 4,400-foot oil horizon, and the hole is reported to be cratering.



Ellison & McBride No. 1 Bean, wildcat in the E. Stedman Survey, near Grapeland, northern Houston County, Gulf Coast district, which is showing for wet gas well from Woodbine sand at 6,028-38 feet

Estimated Production

Estimated daily average production of important Gulf Coast field week ending July 2:

Name of field—	Bbls.
Anahuac	8,532
Barbers Hill	16,150
Conroe	43,539
Hastings	7,435
South Houston	3,227
Thompson	10,187
Tomball	7,415
Greta	15,210
Plymouth	10,417
Saxet	11,398
Saxet Heights	8,039
Miscellaneous	112,013
Total Texas Coast	253,562
LOUISIANA GULF COAST	
Bosco	12,935
Caillou Island	14,878
Cameron Meadows	5,135
Gillis	15,596
Iowa	17,367
Leesville	13,795
Roanoke	6,939
Sulphur	5,339
Tepetate	4,137
Miscellaneous	51,091
Total Louisiana Coast	147,212
Total Gulf Coast	400,774

Louisiana Coast

Operators along the Louisiana Coast were watching the outcome of

(Continued on Page 92)

Oklahoma Operations

By
DAL DALRYMPLE

PRORATION REVISION ASKED FOR OKLAHOMA CITY SECTOR

Revision of Oklahoma proration procedure is sought in two petitions scheduled to be heard by the Corporation Commission July 14 and 15. One petition, filed by the British-American Oil Co., asks that the allowable production of the state be increased from 526,175 bbls. daily to 569,800 bbls. daily, with the Wilcox zone of the Oklahoma City field being allowed at least 125,000 bbls. daily. Allowable for the Wilcox zone now is 107,962 bbls. It is charged that Wilcox zone operators have been discriminated against, a lower per well allowable being forced on all operators as the result of a large increase in potential production the past month without an allowable increase.

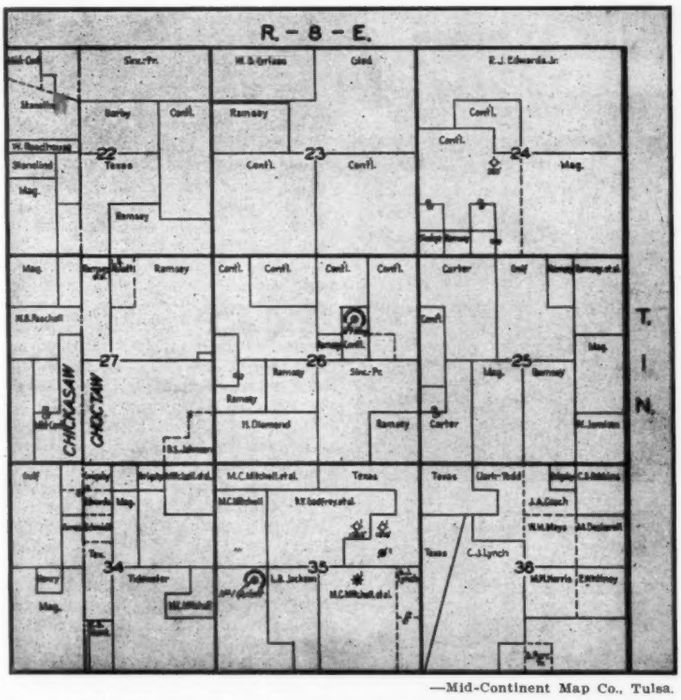
The second petition is that of the Indian Territory Illuminating Oil Co., asking modification of rules to permit lifting of proration in the Simpson zone of the Oklahoma City field. Only 323 of the 468 producing wells drilled in the Simpson zone still are producing. Simpson wells were permitted to produce to capacity from January to June, inclusive, but for July the allowable was set at 10 per cent of potential or, if operators prefer, they may produce the minimum allowable of 200 bbls. per well daily. Nearly all the Simpson wells are producing water, increasing the cost of production, the petition sets out.

Of particular interest in field operations is the showing of a possible pool opener in Garvin County, near Byars. It is the Charles E. Carter and others No. 1 Wood, NW SW SE section 5-4-3, which bailed more than 100 bbls. of oil daily on a three-day test. Gas gauged 240,000 feet a day and shut-in pressure was 340 pounds. After being shut in one day, it was reopened Friday, flowed 75 bbls. of oil in three hours and gas increased to 1,500,000 feet daily. Tubing was being set for additional tests. It had sand and sandy lime at 2,968-79 feet; sand and sandy shale at 2,982-94 feet; sand at 2,994-3,009 feet, and lime at 3,009-19 feet, total depth. Geologists differ as to classification of the formations.

Jesse Extension

The southeast trend from the Jesse pool of Pontotoc County into Coal County apparently is due for considerable wildcat play as a result of the shallow sand showing of the Continental Oil Co. No. 1 King, NE SW NE section 26-1-8. It had sand at 790 to 820 feet and production was estimated at 50 to 100 bbls. of oil a day, but it was being drilled deeper. There are two other active operations in the general area. Sinclair Prairie Oil Co. No. 1 Culver, NE NE SW section 16-1-8, was drilling below 2,000 feet. W. C. Mitchell No. 1 Quiett, NE NW SW section 35-1-8, was shut down at 1,904 feet for heavier equipment to drill deeper.

The title of "biggest producer of 1936" did not remain long with the Crescent field. That transitory honor passed during the week to the Sinclair Prairie Oil Co. and others No. 1 Franklin, SE NW SE section 21-10-2w, in the Moore field of Cleveland County, which flowed 6,283.80 bbls. of oil in four hours to give it potential of 35,274 bbls. Gas averaged 60,300,000 feet. Total depth is 7,318 feet, with Wilcox sand topped at 7,267 feet. The previous biggest producer of 1936 was the Continental Oil Co. No. 2 McConnell, NW SE SE section 28-17-4w, in the Crescent field of Logan County, which made potential of 33,928 bbls. The second well to take potential test during the week in the Moore area was the Sinclair Prairie Oil Co. and others No. 1 Rice, NE NE NE section 28-10-2w, which flowed 2,619.45 bbls. in four hours, making potential of 14,615.28 bbls., with gas gauging 69,483,000 feet.



—Mid-Continent Map Co., Tulsa.

Continental Oil Co. No. 1 King, NW SW NE section 26-1-8, Coal County, found oil in shallow sand but was drilling deeper. W. C. Mitchell No. 1 Quiett, section 35-1-8, is another wildcat on the trend southeast from the Jesse pool

Pontotoc County

Five new producers were completed in the Fitts field of Pontotoc County. Fleetborn Oil Corp. and others No. 8 Woolley, SW NW SW section 27-2-7, made potential of 3,240 bbls. of oil. It topped Viola lime at 3,648 feet; Bromide, 3,900 feet; McLish, 4,110 feet; total depth, 4,287 feet. Skelly Oil Co. No. 12 Park College, NE NW NE section 28-2-7, topped Hunton lime at 3,418 feet; Sylvan shale, 3,715 feet; total depth, 3,720 feet. It was acidized with 3,000 gallons and 5,000 gallons and flowed 365 bbls. of oil net in two hours. Gas gauged 3,600,600 feet, with 1,530 pounds bottom-hole pressure. E. H. Moore and others No. 7 Harper, NW NW NE section 29-2-7, topped Hunton lime at 3,480 feet; Sylvan shale, 3,779 feet; total depth, 3,785 feet. After acidizing, it flowed 378 bbls. of oil gross in five hours and 100 bbls. of oil net. Deep Rock Oil Corp. No. 6 Harden, C E half SE NE section 30-2-7, was acidized and flowed 168 bbls. of oil in five hours, net. Top of Hunton lime was 3,337 feet; Sylvan, 3,635 feet; total depth, 3,638 feet. Clark & Cowden No. 6 Summers, NE SW NW section 17-2-7, topped Atoka sand at 1,717 feet and was completed at 1,724 feet, total depth. After a shot, it pumped 8 bbls. of oil in 24 hours.

Carter Oil Co. No. 2 Brown, NE SE SE section 25-2-6, an old well, was plugged back from 4,280 feet to 4,210 feet and recompleted. After acidizing with 8,000 gallons it flowed 803 bbls. of oil in two hours and 15 minutes, with gas gauging 30,000,000 feet.

Selby Oil & Gas Co. No. 1 Sands, NE cor. section 20-3-5, wildcat, had sand at 1,876 feet, a hole full of water at 1,907 feet, total depth, and was dry and abandoned. First showing of sulfur water was at 190 feet. Top of Woodford was 565 feet; Hunton, 745 feet; Sylvan, 784 feet; Viola, 926 feet; Bromide, 1,270 feet. Mid-Texas Petroleum Co. No. 1 Laney, NE NE NW section 31-5-4, topped Wilcox sand at 2,492 feet; sulfur water intruded at 2,494 feet, total depth. It was plugged back to 1,950 feet, tested dry and was abandoned.

Estimated Production

Estimated daily average production of Oklahoma for the week ending July 4 and for the preceding week is as follows:

	Barrels	
	July 4	June 27
Allen	10,425	10,100
Asher-West Asher	700	725
Burbank	7,675	7,675
South Burbank	14,250	13,750
Balance Osage	23,650	23,400
Blackwell district	4,450	4,625
Bristow-Slick	8,350	8,425
Chandler	4,200	4,225
Crescent	6,225	7,250
Cromwell	3,550	3,575
Cushing-Shamrock	11,475	11,500
Duncan district	4,175	4,075
Edmond	10,000	11,800
Fish	8,975	9,075
Fitts	43,650	48,625
Gray	1,650	1,650
Graham	4,300	4,175
Healdton	9,200	9,200
Hewitt	4,250	4,325
Holdenville	1,025	1,050
Keokuk	2,500	7,200
Konawa	1,750	1,825
Lucien	12,650	12,750
Marshall-Lovell	1,225	1,175
Oklahoma City	106,600	137,775
Olympic	8,150	8,100
Papoose	1,000	1,025
Polo	3,175	3,300
Sasakwa and townsite	3,525	3,600
Sholem-Alechem	3,350	3,425
Seminole field:		
Bowlegs	13,000	13,475
Carr City	7,925	6,850
Earlsboro	7,675	7,400
South Earlsboro	850	850
East Earlsboro	10,700	10,825
Little River	13,500	13,875
East Little River	1,075	1,225
Maud	1,000	975
Mission	2,525	2,525
Seminole	10,275	11,300
East Seminole	2,775	3,925
Searight	3,900	5,450
Total Seminole	75,200	78,675
St. Louis-Pearson	25,000	25,775
Tatums	3,050	3,175
Tonkawa-Garber-Thomas	5,400	5,400
Wewoka	3,925	3,950
Yale-Jennings	3,975	3,950
Other pools	66,000	65,000
Total Oklahoma	508,650	555,325

Many New Tests

New work in Pontotoc County was as follows: Amerada Petroleum Corp. No. 1 Norris, NW SE SE section 26-2-6, an old well, plugged back from 4,395 feet to 4,273 feet, waiting on cement; Fleetborn Oil Corp. No. 2-A Morin, SW SE SE section 20-2-7, rigging up rotary; Magnolia Petroleum Co. No. 17 Metropolitan Life, SW SW SE section 22-2-7, cellar; same operator's No. 10 Burris heirs "A," NW SW NW section 27-2-7, cellar; same operator's No. 3 Statler, SE SE SW section 28-2-7, cellar and pits; same operator's No. 11 Simpson, NW NE NE section 29-2-7, drilling at 325 feet; Blackstock and others No. 3

Moody, SE SW SW section 23-2-7, cellar; same operators' No. 1-A Cradduck, NE NE SE section 25-2-6, cellar; same operator's No. 1-B Moody, NE cor. section 27-2-7, building rig; Simpson & Fell and Westheimer No. 2 Westheimer, SW NW NW section 26-2-7, cellar; Stahl Petroleum Co. No. 2-B Dennis, NW NE NW section 28-2-7, digging cellar; J. E. Crosbie, Inc., No. 1-B Burris, NE SE NW section 27-2-7, building rig; same operator's No. 1-B D. Harden, SW SW NE section 30-2-7, cellar; E. H. Moore and others No. 7-A Harper, NW NW NE section 29-2-7, cellar; Mid-Texas Petroleum Co. No. 2 Harbert, C W half SW SE section 30-5-4, rig; McCollum & Forber No. 1-A Layne, NW NE NW section 30-5-5, building rig; Benedum & Trees No. 5 Malloy, SE SW SW section 30-5-5, an old well being deepened, underreaming. W. A. Delaney No. 2 Killcrease, SE SW NW section 7-4-8, drilling at 650 feet.

Oklahoma County

Completions in Oklahoma County included 13 wells in the Capitol extension of the City field and one Edmond well. Barnsdall Oil Co. and Ray Oil Corp. No. 4 Edwards, SW NW SE SE section 15-12-3w, flowed 4,150 bbls. in six hours, making potential of 17,494 bbls. Top of second Wilcox sand was 6,394 feet; total depth, 6,436 feet. Barnsdall Oil Co. No. 1 Fitzhugh, NW NW SE section 22-12-3w, Block 1, Fitzhugh addition, topped second sand at 6,406 feet and was completed at 6,475 feet, total depth. It made potential of 9,987 bbls., based on six-hour flow of 2,379 bbls. Same operator's No. 2 Fitzhugh, NW NW SE section 22-12-3w, Block 2, Fitzhugh addition, flowed 2,347 bbls. in six hours and made potential of 9,716 bbls. on gas lift. Top of second Wilcox sand was 6,390 feet; total depth, 6,490 feet. Same operators No. 3 Guthrie, SE SW SW SE section 15-12-3w, topped second sand at 6,436 feet; total depth, 6,465 feet; flowed 139 bbls. in six hours and made potential of 488 bbls., on gas lift. It is in the north end of the extension, outside the city limits.

Phillips Petroleum Co. and Black Gold Oil Co. No. 3 D. F. Sawyer, NE cor. section 22-12-3w, flowed 3,712 bbls. in six hours and made potential of 15,408 bbls. Top of second sand was 6,368 feet; total depth, 6,375 feet. Phillips Petroleum Co. No. 1 Howell, NW NE SE section 22-12-3w, Block 1, Alta Lawn addition, had top of second Wilcox sand at 6,391 feet; total depth, 6,494 feet. It flowed 3,103 bbls. in six hours, making potential of 12,429 bbls. Same operator's No. 1 Dorthea Harrell, NE SW SE section 22-12-3w, Block 1, Harrell addition, made potential of 9,952 bbls., after flowing 2,482 bbls. in six hours. Top of second sand was 6,360 feet; total depth, 6,511 feet. Same operator's No. 2 Stiles Community, NW NW NE section 34-12-3w, about three blocks north of the north end of the older producing area, flowed 717 bbls. in six hours on gas lift, making potential of 2,899 bbls. Top of second sand was 6,377 feet; total depth, 6,379 feet.

More Completions

Plaza Oil Co. No. 1 Dewey School, NE SE NW NE section 22-12-3w, Block 11, McNabb-Hunt addition, topped second sand at 6,395 feet; total depth, 6,458 feet; flowed 3,004 bbls. in six hours and made potential of 12,330 bbls. F. C. Hall, Inc., and others No. 1 Villa, SE SE NE SE section 22-12-3w, was drilled in under pressure at 6,484 feet, total depth, flowed 2,100 bbls. in six hours and made potential of 8,300 bbls. on gas lift. Top of second Wilcox sand was 6,400 feet. Sunray Oil Co. No. 1 Avey, SE NW SE section 22-12-3w, made potential of 8,424 bbls. on gas lift, after flowing 2,007 bbls. in six hours from second Wilcox topped at 6,366 feet; total depth, 6,509 feet. Anderson-Prichard Oil Corp. No. 1 Jackson, NE NW SW NE section 22-12-3w, Block 1, Woody Crest addition, topped second sand at 6,421 feet; total depth, 6,426 feet; flowed 378 bbls. in six hours on gas lift, making potential of 1,575 bbls. It is on the west edge of production. Black Gold Oil Co. No. 3 Sawyer, SW SW NE section 22-12-3w, also along the west edge, flowed 227 bbls. in six hours, making potential of 859 bbls. on gas lift. Top of second sand was 6,413 feet; total depth, 6,416 feet.

In the Edmond field, Pure Oil Co. No. 1 Berquist, SW SW SE section 30-14-3w, topped second Wilcox sand at 6,702 feet and was completed at 6,711 feet, total depth. It flowed 232 bbls. of oil in four hours, making potential of 1,392 bbls.

New work in Oklahoma County was as follows: Turman Oil Co. No. 1 Francis, SE SE SW section 22-12-3w, Block 1, Francis Capitol addition, total depth 40 feet, waiting on cement; Marathon Oil Co. No. 12 Dahl, NE SW SE section 31-14-3w, cementing cellar; same operator's No. 13 Dahl, NW SE SE section 31-14-3w, digging cellar and pits; Continental Oil Co. No. 10 Young, SW SE NW section 31-14-3w, moving in tools.

Seminole County

Eight producing wells and one dry hole were completed in Seminole County. Sinclair Prairie Oil Co. No. 1 Rogers, NW NE SE section 12-5-7, in the Allen pool, topped Wilcox sand at 4,177 feet; total depth, 4,199 feet. It swabbed 330 bbls. in 19 hours; was shot and swabbed 728 bbls. in 24 hours. Wood Oil Co. No. 1 Harjo, SE SW NW section 12-5-7, topped dolomite at 4,141 feet; Wilcox sand, 4,195 feet; total depth, 4,202 feet. Water intruded and it was plugged back to 4,194 feet to complete. After acidizing, it swabbed and flowed 155 bbls. in the first 24 hours. Fleetborn Oil Corp. No. 2 Cahill, C S half NW NE section 7-6-8, pumped 17 bbls. of oil in 24 hours from Gilcrease sand at 3,865-91 feet; total depth, 2,894 feet. B. F. Green No. 2-A Spillman, SW cor. section 7-6-8, topped Cromwell sand at 3,038 feet; total depth, 3,170 feet, and swabbed 16 bbls. of oil in 24 hours. Fleetborn Oil Corp. No. 6 Stump, NE SE SW section 27-8-8, swabbed 500 bbls. in 24 hours from Wilcox sand topped at 4,183 feet; total depth 4,201 feet. Carter Oil Co. No. 2 Whitney, C W half SE SW section 7-10-6, was completed at 4,636 feet, total depth, in Wilcox sand topped at 4,621 feet. It swabbed 531 bbls. in 24 hours. Mid-Continent Petroleum Corp. No. 1 W. R. Black, C E half NE NE section 15-10-6, pumped 115 bbls. of oil and 70 bbls. of water in 24 hours from Misener sand topped at 4,195 feet; total depth, 4,206 feet. Carter Oil Co. and others No. 1 Diamond, C S half NW NE section 35-11-6, topped Misener sand at 4,149 feet; total depth, 4,162 feet, and made potential of 330 bbls. in 24 hours. Kingwood Oil Co. No. 1 Dodson, SE NE NE section 28-6-6, topped Wilcox sand at 3,922 feet, had a showing of sulfur water in cores from 3,940-58 feet, total depth, and was dry and abandoned.

Seven new operations in Seminole County were reported as follows: Vierson No. 6 Jones "A," NW SE SW section 2-6-6, location; same operator's No. 5 Jones "A," SW NW NW section 11-6-6, set 12-inch casing at 41 feet; H. E. Kennedy No. 1 Bowlegs, NW NW SE section 3-8-7, wildcat, location; Fleetborn Oil Corp. No. 1 Chapman, NE NW NW section 34-8-8, an old well, plugging back to Hunton lime; Pioneer Drilling Co. No. 2 Reed, NW SW SE section 27-8-8, set 12-inch casing at 60 feet; Wood Oil Co. No. 1 Mary, SW NE SE section 8-9-7, building rig; Carter Oil Co. and others No. 2 Twinam, C N half SW NW section 35-11-6, building rig.

Carter Oil Co. and others No. 1 Stewart, NE NE SE section 10-9-6, an old well, was deepened from 4,069 feet to 4,091 feet, acidized, flowed 37 bbls. of oil in 24 hours through tubing, and was recompleted.

Osage County

Sinclair Prairie Oil Co. No. 6, NW NW NE section 16-25-6, on Tract 232 in the South Burbank area of Osage County, made 24-hour potential of 1,476 bbls. of oil and was completed at 2,830 feet, total depth. Top of Bartlesville sand was 2,810 feet; first flow of oil, 2,820 feet. Carter Oil Co. and others No. 6 Oliphant, SW NE SE section 10-25-6, topped Bartlesville sand at 2,790 feet, had first flow of oil at 2,820 feet and was completed at 2,880 feet. It flowed 312 bbls. of oil in 24 hours, with 1,500,000 feet of gas.

Lewis Production Co. and Continental Oil Co. No. 13 Ah-Ka-Me, SE NW SE section 9-24-7, in the Naval Reserve pool, had Bartlesville sand at 2,566 feet, total depth 2,636 feet, was shot with 80 quarts and flowed 209 bbls. of oil in 24 hours, completed. Same operators' No. 14 Ah-Ka-Me, NW SE SE section 9-24-7, flowed 249 bbls. of oil in 24 hours after a shot and was completed after plugging back to 2,588 feet from 2,592 feet, total depth. Top of Bartlesville sand was 2,509 feet.

Galt Brown No. 2 Osage, NE SW NE section 14-24-8, pumped 25 bbls. of oil in 24 hours after a shot with

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120 quarts at 2,221-69 feet; total depth, 2,281 feet, completed. Harland Oil Co. No. 78 Osage, NW NE NE section 25-24-11, had Bartlesville sand at 1,655-1,771 feet, total depth, was shot and produced 500,000 feet of gas and one-half barrel of oil, completed. Idaho Oil Co. No. 2 Osage, SW NE SW section 18-22-12, an old well, was deepened from 1,844 feet to 2,187 feet, plugged back to 2,180 feet; was shot, pumped 18 bbls. of oil and 12 bbls. of water, and was recompleted.

New work in Osage County: Lewis Production Co. No. 6 Whitehom, NE SW SW section 10-24-7, drilling at 525 feet; Lewis Production Co. and Continental Oil Co. No. 14 Ke-Ne-Kah, SE NW SW section 16-24-7, drilling at 525 feet; Peters Oil Corp. and Sinclair Prairie Oil Co. No. 112 Sawyer, NW SW NE section 24-24-7, an old well deepened, had chat at 2,425-72 feet, total depth, preparing to shoot; Peters Petroleum Corp. No. 10 Osage, NE SW NW section 32-24-9, spudded; Harland Oil Co. No. 79 Osage, SE SW NE section 25-24-11, spudded; Osage Gas Producing Co. No. 398 Osage, NE SW SW section 20-28-11, location.

Hughes County

Four oil wells and one gas well were completed in Hughes County. Three of the new producers were in the Olympic pool. George Manahan No. 6 Oliphant "E," NE SW NW section 1-9-8, topped Senora sand at 1,705 feet; total depth, 1,717 feet. After a shot, it flowed and swabbed 150 bbls. of oil in 24 hours. George Manahan and others No. 3 Simmer, SW cor. section 12-9-8, flowed 148 bbls. in 24 hours after a shot and was completed at 1,875 feet, total depth. Top of Senora sand was 1,850 feet. Sinclair Prairie Oil Co. No. 12 Oliphant, NE SE SE section 1-9-8, had Senora sand at 1,643 to 1,672 feet; total depth, 1,676 feet. It was shot and flowed 72 bbls. of oil through tubing in 24 hours. Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 3 Harris "C," SE NE NW section 8-6-8, was completed at 4,215 feet, total depth, in Wilcox sand topped at 4,208 feet. It flowed 540 bbls. of oil in 24 hours. Texas Co. No. 2 Keaton, C SW SW section 4-8-10, produced 3,500,000 feet of gas from Cromwell sand topped at 3,099 feet, and was completed at 3,144 feet, total depth.

Two new tests were reported in Hughes County. J. L. Youngblood No. 1 Becky Sandridge, SW SW NE section 19-9-8, was moving in tools. Gulf Oil Corp. No. 3 Tiger, NW SW SW section 6-9-9, was a location.

Pottawatomie County

The only completion in Pottawatomie County was the Producers, Inc., No. 2 Cardwell, SE SW NW section 15-7-4, in the St. Louis district. It topped Simpson dolomite at 4,165 feet; total depth, 4,232 feet. After acidizing, it pumped 210 bbls. of oil and 200 bbls. of water in 24 hours.

New work starting in Pottawatomie County was as follows: Hilton Phillips No. 3 Bettis, SW SE SW section 21-7-4, digging cellar; same operator's No. 2 Cherry, SW NE SW section 21-7-4, digging cellar; Marathon Oil Co. No. 2 Brandenburg, SW SE NW section 34-8-4, location.

Okfuskee County

Manahan & Grisso No. 7 Dalton, SE NE SE section 36-10-8, in the Okfuskee County extension of the Olympic pool, flowed 175 bbls. of oil in 24 hours from Senora sand topped at 1,736 feet, and was completed at 1,753 feet, total depth. Ralvern Oil Co. No. 1 Keys, C SE NW section 11-11-8, in the Dill pool, flowed 362 bbls. of oil through tubing choke in the first three hours after acidizing and was completed at 3,919 feet, total depth. Top of Hunton lime was 3,901 feet.

New work in Okfuskee County: Blackwell Oil & Gas Co. No. 3 Dalton, SW SE NE section 36-10-8, waiting on cement at 47 feet; George Manahan No. 9 Dalton, NW NE SE section 36-10-8, cellar; Hayes Drilling Co. No. 1 Durkee, SE SE SW section 21-10-11, building rig.

Payne County

Amerada Petroleum Corp. and others No. 2 Friedman, SW SE SE section 28-19-3, in the Stillwater pool, Payne County, swabbed 377 bbls. of oil through tubing in 24 hours and was completed at 4,302 feet, total depth. It previously had flowed 450 bbls. of oil in 24 hours after a shot. Wilcox sand was topped at 4,295 feet. Twin State Oil Co. No. 1 Morris, NE NW SW section 5-19-5, in the Garr area, flowed 166 bbls. of oil in 17 hours from Misener sand topped at 3,607 feet, and was completed at 3,644 feet, total depth. Viola lime was topped at 3,612 feet; Wilcox sand, 3,636 feet, and water intruded at 3,643-44 feet. It was plugged back to 3,621 feet, shot and flowed 220 bbls. in 24 hours.

Pawnee County

Jack Phillips No. 2 Eldridge, C W half SW SE section 7-20-9, in the Lauderdale area, Pawnee County, pumped 19 bbls. of oil in nine and one-half hours from lower Layton series, had at 1,251-61 feet, total depth, and was completed. Upper Layton, topped at 1,210 feet, was dry.

Logan County

Two new tests were starting work in Logan County. Sinclair Prairie Oil Co. No. 2 Phillips, SE SE NW section 28-17-4w, in the Crescent field, was a cellar. Texas Co. No. 4 Denny, NW NE SE section 33-17-4w, was digging cellar.

Noble County

The only completion in Noble County was Ray Ranger and others No. 1-A Dale, SE cor. section 13-22-2, in the Marathon area. It topped first Wilcox sand at 4,403 feet; second Wilcox sand, 4,438 feet; total depth, 4,460 feet, and flowed 250 bbls. of 41.8 gravity oil in 24 hours.

Two new Noble County tests were reported. Helmerich & Payne No. 1 Long, C SE NW section 28-20-2w, was a location. So was Sinclair Prairie Oil Co. No. 2 Kriethe, SW SW NE section 28-20-2w, both in the Lucien area.

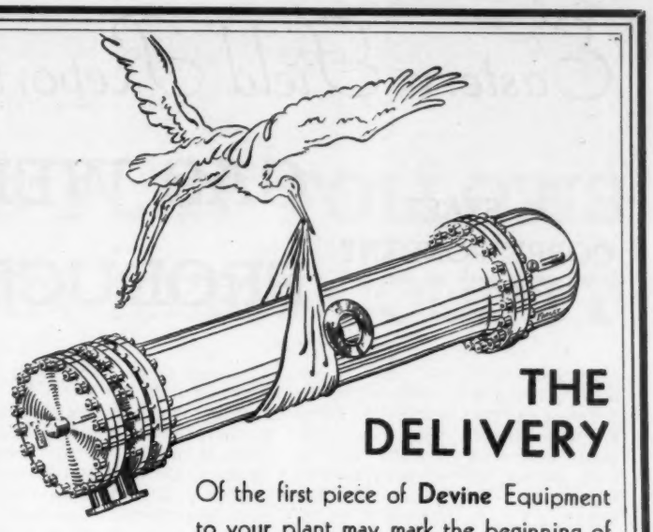
Kay County

Shell Petroleum Corp. and Continental Oil Co. No. 3 Lawrence, NE SE NW section 5-28-1w, an old well in the Braman sector of Kay County, was rigging up to drill deeper.

Garfield County

W. J. Sherry and others No. 1 Hoken, NW NW SW section 32-20-4w, wildcat in southern Garfield County north of the Marshall area, showed salt water on Schlumberger test at 7,035 feet and was dry and abandoned in second sand at 7,046-53 feet, total depth. Top of Layton sand was 4,820 feet; Mississippi lime,

(Continued on Page 76)



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Eastern Field Report

By STAFF CORRESPONDENT

GAS WELLS OUTNUMBER OIL PRODUCERS IN WEEK'S WORK

PITTSBURGH, Pa., July 6.—Another gas well was completed in the Oriskany gas field in Kanawha County, West Virginia, and some additional new work is under way in Poca district, the northern part of this field. In Malden district, Kanawha County, Godfrey L. Cabot, Inc. completed No. 10 Campbells Creek Coal Co. in the Oriskany sand at 4,793 feet. It is showing for over 1,000,000 feet a day. No. 9 on this lease was shot and has a volume of over 4,000,000 feet a day, total depth 4,605 feet.

In Poca district, Kanawha County, W. O. Zeibold, the geologist who brought in the D. A. Griffith large gas well in this district as the first north of Elk district, has started drilling a test on the Griffith and Dixon lease about 1,355 feet southwest of No. 1 Griffith. It is on Grapevine Run. About 4,850 feet southwest of the Griffith well, the United Carbon Co. has rig up on the W. P. Moss farm. About halfway between this and the Griffith well, George Lapier made a location on the Joseph Legg farm. United Carbon Co. spudded in on Ahaz Spencer farm and has completed the rig for the test on the S. H. Milam farm.

In Elk district, Kanawha County, the most interesting test now drilling is that of the Glen Oil & Gas Co. on the Virginia Joint Stock Land Bank (Morse farm) lease, 3 miles northeast of the Copenhaver farm. It is drilling at 4,358 feet. The West Virginia Gas Corp. is down 4,200 feet in deepening No. 1 J. H. Cooper. United Fuel Gas Co. is spudding on the C. B. Graham farm, and has the rig up on the King Land Co. and the M. F. Orth and H. C. Walker farm. Columbian Carbon Co. is down 6,074 feet deepening the test on the M. M. Robertson farm which was dry in the Oriskany sand, and is down 1,164 feet on the Grant Copenhaver farm. V. C. Smith is abandoning the test on the island at the mouth of Coopers Creek at a depth of 5,625 feet. Benedum and Trees are drilling at 2,245 feet in No. 2 Mary C. Wingfield. Yoak Oil & Gas Co. is down 1,834 feet in No. 2 Goshorn heirs. S. B. Avis, trustee is drilling at 2,408 feet on the Grant Copenhaver tract No. 2. The Sandy Elk Oil & Gas Co. is down 944 feet on the Perry Moles heirs farm. United Carbon Co. is drilling at 1,300 feet on the Henry C. Smith farm.

In Malden district, Kanawha County, United Fuel Gas Co. is drilling two wells on the George Creek Coal Co. lease, No. 4,643 at 480 feet and No. 4,657 at 625 feet. United Carbon Co. has reached 2,300 feet on the J. Q. Dickinson farm. Godfrey L. Cabot, Inc. at 5,049 feet on the W. D. Lewis farm; 2,703 feet in the second deep test on the William Tompkins farm: 4,206 feet in No. 2 Nellie B. Tompkins and 1,623 feet in No. 3.

In Big Sandy district, the most important test on the Warfield anticline, is that of United Carbon Co. on the J. A. and M. F. Osborne farm, drilling at 3,625 feet. In Union district, West Virginia Gas Corp. is below 2,900 feet on the C. M. and Lizzie Caldwell farm. In Loudin district, Godfrey L. Cabot, Inc. is building rig on the Marmet Coal Co. lease.

Other districts in the lower eastern fields were equally active.

SOUTHEAST OHIO

In Columbiana County, Natural Gas Co. of West Virginia completed the test on the Albert Ketchum farm in section 28, Madison Township, originally intended for the Oriskany sand but stopped in the Berea sand as a gas well at 873 feet. Same company's deep test on the Grafton farm in section 25, Wayne Township, is drilling at 550 feet.

In Coshocton County, Kundtz, Hulse and others completed No. 3 Charles M. Dawson farm, section 17, Perry Township, in the Clinton sand at 3,109 feet, as a gas well gauging 200,000 feet a day.

In Hocking County, Preston Oil Co. completed No. 1,604 Sunday Creek Coal Co., in section 6, Ward Township, in Clinton sand at 3,548 feet, showing for 20 bbls. a day.

In Holmes County, S. J. Bell and others completed No. 3 Cliff Finley, section 13, Mechanic Township, in Berea sand at 915 feet. It is a gas well gauging 100,000 feet a day.

In Jefferson County, Malinda J. Braden and others drilled No. 2 Jefferson County Infirmary, section 12, Cross Creek Township, through Berea sand to 1,500 feet. It was dry and will be used for a pressure hole.

In Knox County, Ohio Fuel Gas Co. completed a 2,000,000-foot gas well on the Dwight Clark farm, section 17, Butler Township, in Clinton sand. In section 21 of this township, Preston Oil Co. drilled a dry hole on the Mary McClarnon farm through the Clinton sand.

In Licking County, George H. Long Account No. 6 drilled a test on the Chris Johnson farm, section 15, Fallsburg Township, through Clinton sand at 3,006 feet. It filled up 735 feet in 24 hours after shot, and did not flow, but will possibly make a light pumper. In Hanover Township, the Edward H. Everett Co. drilled a second test on the Amy F. Nethers farm in section 17, through Clinton sand to 3,015 feet. It was a dry hole.

In the shallow pool in Licking County, in section 23, Madison Township, George H. Long completed No. 5 Eliza J. Fulton in Berea sand at 751 feet, a 1-bbl. pumper. In section 11, Mary Ann Township, Gale Earley completed a test on the George Wilson farm in the Berea sand at 735 feet, showing for 3 bbls. a day. In section 17, Franklin Township, Alexandria Banking Co. and others completed No. 4 Jane G. Hirst farm at 715 feet, in Berea sand, and it is good for 2 bbls. a day.

In Medina County, section 10, Brunswick Township, Ohio Fuel Gas Co. completed a test on the C. F. Reutter farm in Clinton sand at 3,115 feet. It gauges 1,000,000 feet a day, and is making 5 bbls. of oil a day. On Tract 6, Lot 22, Chatham Township, Curtis and Eaken completed No. 15 Thomas Brown, Jr., in Berea grit at 403 feet. It produced 2 bbls. the first day after shot.

In Monroe County, Witten Creek Oil & Gas Co. drilled a second test on the Richard Scott farm on Witten Creek, section 24, Washington Township, through Squaw sand at 1,606 feet. There was a small volume of gas in the Injun sand at 1,578 feet.

In Perry County, Thistle Oil Co. completed No. 24 R. Drake farm, section 33, Monroe Township, in Berea sand at 1,053 feet. It produced 10 bbls. the first day after shot. In section 6, Reading Township, Preston Oil Co. drilled a dry hole on the A. H. Gilmore farm through the Clinton sand at 2,970 feet. In section 31, Hopewell Township, Wehrle Co. drilled a dry hole on the George F. Sprider farm through the Clinton sand to 2,905 feet.

SOUTHWEST PENNSYLVANIA

Two producers and one gas well were completed in southwest Pennsylvania during the week. In Amwell Township, Washington County, Pennsylvania, along the productive Fifth sand streak, A. V. Lewis and others completed a well on the Phelan No. 2 lease near Chambers Dam. The top of the Fifth sand was at 2,953 feet, with oil showing at 2,963-67 feet. It filled up 2,500 feet in 10 hours and will make a 25-bbl. pumper. It will be drilled into the second pay.

In Springhill Township, Greene County, Dunn Mar Oil & Gas Co. completed No. 4 David Hostutler in Gordon sand, topped at 3,072 feet with oil and gas showing at 3,084 feet. It is good for 12 bbls. a day along with 200,000 feet of gas.

In Franklin Township, Greene County, Carnegie Natural Gas Co. completed deepening No. 1 C. J. Huffman at 3,177 feet. Fifth sand was at 2,974-3,006 feet with gas at 2,979 feet. The Bayard sand was topped at 3,125 feet, with gas at the top of the sand. It gauges 148,000 feet from both formations.

In Dunkard Township, Greene County, Convex Glass Co. is drilling on the Leroy McClaran farm. In Center Township, Carnegie Natural Gas Co. is down 1,560 feet on the J. W. Milliken farm.

In Richhill Township, Greene County, the Manufacturers Light & Heat Co. is drilling at 2,983 feet on the William Baltzell farm; 1,881 feet on the W. Gunn farm and 1,640 feet on the C. Wolf farm. In this county, Equitable Gas Co. is drilling the following: Metrezat farm at 1,160 feet; Mundell farm at 230 feet; Elizabeth Johnson farm at 1,345 feet; George Hennen farm at 722 feet; Craig farm at 265 feet; Brant farm at 1,990 feet; Lemmons farm at 1,875 feet; hauling in the tools on the Blanche Haines farm; on the Hiram White farm at 1,700 feet.

In South Franklin Township, Washington County, Carnegie Natural Gas Co. found the Fifth sand in the test on the Belle A. Jones farm at 2,855 feet with a show of oil at 2,856-60 feet. It is 2,875 feet deep. Union Gasoline & Oil Corp. is spudding on the H. R. Post farm. E. H. and J. B. Tague are building rig for No. 14 Adaline D. McKennan estate.

In East Finley Township, Duquesne Gas Co. is down 1,561 feet in No. 3 M. B. Rodgers. Union Gasoline & Oil Corp. has reached 1,782 feet in No. 5 J. N. Clutter. In Morris Township, Washington County, A. V. Lewis and others have reached 1,960 feet on the H. Sanders farm.

In Mount Pleasant Township, Washington County, Norwood Johnson and others are drilling at 5,150 feet on the James McBurney farm, 2 miles south of Hickory.

WEST VIRGINIA

Two small producers were completed in West Virginia. In Kanawha County, the Rex Oil & Gas Co. completed No. 4 Goshorn heirs farm, in Big Sandy district, in the Weir sand at 1,985 feet. It is showing for 2 bbls. a day.

In Pleasants County, H. C. Johnson and others drilled No. 8 on the Fracker and Jackson lease in Grant district in the first Salt sand at 285 feet. It is good for a quarter barrel a day.

In Clay County, Virginian Gasoline & Oil Corp. shot and cleaned out Nos. 34 and 35 Brown, Swan, Goshorn and Geary tract and increased No. 34 to 15 bbls. a day and No. 35 to 37 bbls. a day. In Mannington district, Marion County, Clifton Oil & Gas Co. improved production by shooting No. 3 Frank Snyder.

Gas Wells

In Cabell County, Holton Gas Co. completed a test on the L. E. Adkins farm in McComas district in Big Injun sand as a fair gas well. The Big Lime was at 1,315-1,474 feet; the top of the Big Injun sand at 1,537 feet

(Continued on Page 72)

California Field Report

By
L. P. STOCKMAN

BIG LEASING PLAY FOLLOWS DISCOVERY IN KERN COUNTY

LOS ANGELES, Calif., July 6.—The search for new oil fields in California has been greatly stimulated by the recent discovery of the Shell Oil Co. in the Stevens district of Kern County and approximately 50,000 acres of potential oil land throughout the state in the past 30 days. Operators are also aggressively searching for gas fields. Up in the Rio Vista gas field of Solano County, recently discovered by the Amerada Petroleum Co., the Standard Oil Co. has staked location for No. 1 Anderson, 1 mile southeast of the Amerada's discovery well, No. 1 Emigh, located in section 26-4-2. In addition to this new location, the Standard is putting the finishing touches on a new rig in the McDonald Island gas field of San Joaquin County and this well is expected to be spudded in within the next 10 days. The Standard's second test in the McDonald Island gas field is located on the Weyl-Zukerman lease in section 24-2-4.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	June 21		June 14			
Intercoastal-domestic:	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Diesel and gas oil	.....	.....	.....	.....	151,541	527,098
Gasoline	96,964	13,852	117,235	16,748	3,083,115	3,547,745
Kerosene	.....	.....	5,821	832	649,430	669,351
Foreign exports:						
Crude oil	96,396	13,771	.....	.....	4,420,293	5,569,177
Fuel oil	76,384	10,912	387,312	55,330	5,035,005	6,098,714
Diesel and gas oil	95,432	13,633	67,686	9,669	2,807,049	2,126,539
Gasoline	.....	.....	228,487	32,641	3,336,841	2,958,847
Kerosene	.....	.....	99,267	14,181	595,079	771,718
Other unfinished oil ..	.....	.....	.....	.....	16,894	65,822
Coastwise-domestic:						
Crude oil	.....	.....	235,316	33,617	3,514,195	2,647,166
Fuel oil	62,605	8,944	332,166	47,452	4,295,310	4,720,379
Diesel and gas oil	.....	.....	109,439	15,634	629,366	497,364
Gasoline	126,174	18,025	115,317	16,474	6,029,995	4,711,553
Kerosene	18,662	2,666	.....	.....	119,060	73,022

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	.....	157,258
Gasoline	.....	.....	.....	.....	147,054	.....
Kerosene	.....	.....	.....	.....	.....	149,715
Asphalt	.....	.....	.....	.....	68,586	280,849
Lubricants	.....	.....	.....	.....	27,673	29,221
Foreign exports:						
Crude oil	.....	.....	.....	.....	1,321,047	1,426,499
Fuel oil	12,974	1,853	.....	.....	1,405,398	904,443
Diesel and gas oil	.....	.....	61,303	8,758	550,617	576,789
Gasoline	.....	.....	85,815	12,259	1,589,481	1,412,060
Kerosene	.....	.....	.....	.....	389,174	447,556
Lubricants	.....	.....	11,419	1,631	150,074	130,074
Coastwise-domestic:						
Fuel oil	146,311	20,902	36,789	5,256	3,566,886	2,923,857
Diesel and gas oil	31,980	4,569	.....	.....	348,855	134,687
Gasoline	152,311	21,759	64,582	9,226	2,477,274	2,486,656
Kerosene	18,929	2,704	.....	.....	88,330	53,139

Fresno County

The Cantua district of Fresno County has been the scene of considerable activity during the past few weeks and practically every major operator in the state has taken protective acreage since Western Gulf Oil Co. ran a formation tester and found a small quantity of production. The Mohawk Oil Co. recently acquired several hundred acres of potentially productive oil land northwest of the test now being drilled by the Western Gulf and tentative plans call for the immediate drilling of a conclusive test. The Western Gulf has drilled two dusters in this area up to the present time, although the first well showed a small quantity of light gravity oil.

Three wells were completed in the Mountain View field of Kern County and two registered substantial production. Hogan Petroleum Co. No. 3 Symons flowed 1,282 bbls. of clean 31.4 gravity oil and 1,600,000 feet of natural gas per day from 6,010 feet. Petrol Co. No. 1 Bloemer in section 32-30-29, flowed 1,390 bbls. of clean 31.9 gravity oil and 2,400,000 feet of natural gas per day from 5,895 feet after the hole had been finished with a 6⅝-inch liner carrying 252 feet of perforated. Shell Oil Co. No. 8 Porter No. 2 was brought in doing 420 bbls. of clean 30.8 gravity oil per day from 5,250 feet. Shell staked two locations on this lease.

Inglewood

In the Inglewood field of Los Angeles Basin, Standard Oil Co. completed No. 78 Los Angeles Investment, flowing 3,760 bbls. of clean 34.3 gravity oil and 2,300,000 feet of natural gas per day from 4,024 feet. The hole was finished with a 6⅝-inch liner including perforations at 3,388-3,599 feet, 3,639-3,834 feet and at 3,899-4,013 feet. Shell Oil Co. recompleted No. 17 Rindge cleaning out, and returned it to production flowing 649 bbls. of relatively clean 28.3 gravity oil per day from 3,291 feet. In the Long Beach field, Texas Co. recompleted No. 4 Harlow Kent after acidizing, and returned it to production pumping 181 bbls. of 24.6 gravity oil, cutting approximately 20 per cent.

In the Redondo section of the Torrance field, Macvan Oil Co. No. 1 Redondo was completed pumping 151 bbls. of clean 15.9 gravity oil per day from 3,741 feet. R. A. Brown's No. 1 Torrance was good for 140 bbls. of 14.8 gravity oil cutting 10 per cent from 3,661 feet. In the East Coyote field, the Bartholomae Oil Co. recompleted No. 2 Stern after deepening to 4,717 feet, and returned it to production pumping 123 bbls. of clean 24.8 gravity oil per day. The production was not from the bottom of the hole, as the casing was perforated in two thin oil zones logged higher up.

Midway-Sunset

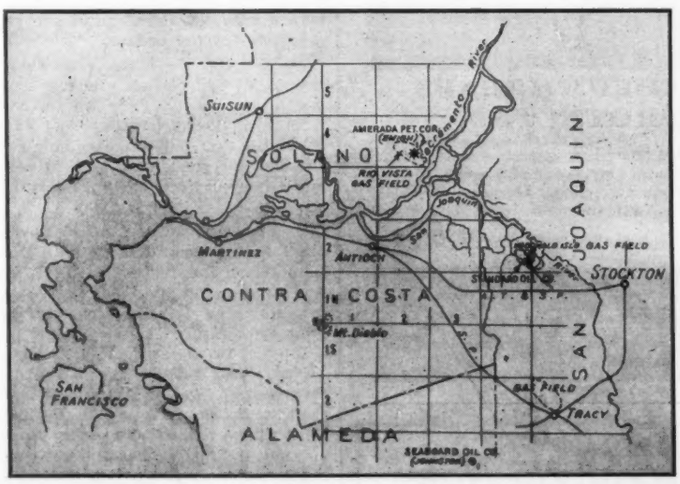
The Texas Co. in the Midway-Sunset field of Kern County completed No. 15 Midway in section 32-32-24, pumping 506 bbls. of relatively clean 22.3 gravity oil per day from 2,850 feet. The General Petroleum Corp. No. 15-B Essex in section 6-11-23, proved good for 110 bbls. of 17.6 gravity oil per day from 2,388 feet when put on the beam early in the week. The Alford Oil Co. No. 1 Equitable completed at 3,367 feet after the hole had been redrilled to 3,218 feet and an 8⅝-inch liner including 88 feet of perforated landed at 3,218 feet was only good for 25 bbls. of pipe line oil.

In the Kern River field of Kern County, General Petroleum completed No. 48 Young in section 14-28-27, flowing 310 bbls. of clean 14.8 gravity oil per day from 2,050 feet although the hole was plugged back to 2,010 feet before being swabbed in. Texas Co. No. 5 Lehman proved good for 201 bbls. of clean 15.1 gravity oil upon being put on the beam following completion at 2,090 feet. The hole was finished with a 6⅝-inch liner carrying 320 feet of perforated. In the McKittrick field of Kern County, East Puente Oil Co. completed No. 21 in section 11-30-21 pumping 70 bbls. of 15.1 gravity oil per day from 1,263 feet and immediately began installing rotary drilling equipment in No. 22 preparatory to an early spud.

Mount Poso

Shell Oil Co. in the Mount Poso field of Kern County staked location for five new wells early in the week and started to haul in necessary equipment. The new projects are Nos. 16 and 17 on the Security property in section 16-27-28 and Nos. 27, 28 and 29 on the Vedder property in section 9-27-28. Within the last few days, the General Petroleum completed No. 33 Heisen, section 16-27-28, pumping 290 bbls. of clean 16.1 gravity oil per day from 1,594 feet after the hole had been finished with a 6⅝-inch liner including 59 feet of perforated. Bourke & Dyer No. 1 Stockton in section 28-26-28, was dry and abandoned at 1,905 feet. Modoc Petroleum Co. picked up the pay in its No. 1 Vedder-Bowles in section 21-26-28 at 1,521 feet and the hole is being reamed preparatory to an early production test. In the southern part of the Mount Poso field, the Union Oil Co. cored an excellent oil sand and has landed a water string.

Barnsdall Oil Co. in the Round Mountain field of Kern County completed No. 5 Caldwell, pumping 260 bbls. of exceptionally clean 17.1 gravity oil per day from 1,815 feet after the hole had been finished with a 6⅝-inch liner carrying 40 feet of perforated. The Barnsdall only required a total elapsed time of six days from spud to completion with its No. 5 Caldwell thus indicating the rapidity with which wells in the Round Mountain field can be drilled. Shell Oil Co. completed Nos. 13 and 14 Caldwell but actual production data are not available. They should each be



Two new gas fields have been discovered northwest of the Tracy gas field and another test well will be drilled southwest of Tracy in Alameda County

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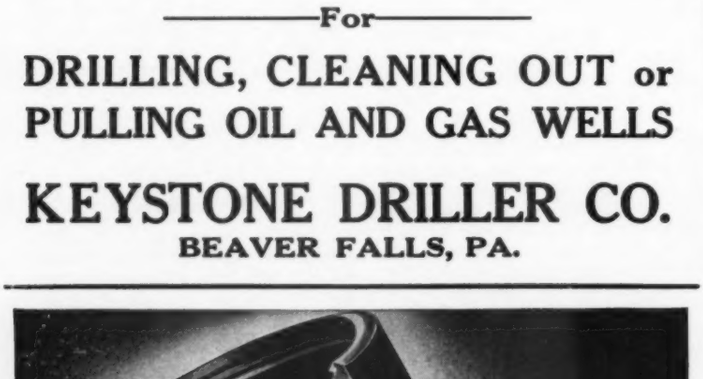

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good for at least 250 bbls. and may show a much larger production.

Edison

Wood-Callahan Oil Co. No. 1 Gerrard in the Edison field in section 23-30-29, was completed a few days ago, pumping 240 bbls. of clean 15.9 gravity oil per day from 2,072 feet after the hole had been finished with a 6⅝-inch liner including 100 feet of perforated.

In the Shiells Canyon district of Ventura County, Petroleum Securities No. 3 Home Ranch was brought in flowing 214 bbls. of clean 37.1 gravity oil and 3,000,000 feet of natural gas per day from 3,899 feet after the hole had been finished with a 5¾-inch liner carrying 200 feet of perforated. This well could easily double its initial daily production with a larger bean. In the Las Posas section of Ventura County, Calco Petroleum Co. completed No. 3 in section 17-3-20, pumping 221 bbls. of clean 22.1 gravity oil per day from 3,472 feet after the 8⅝-inch was perforated with a Lane Wells gun perforator between 2,600 feet and 3,460 feet.

In the Richfield district, Union Oil Co. completed No. 32 Chapman pumping 80 bbls. of 18.1 gravity oil which showed an initial cut of 6 per cent. It was bottomed at 3,403 feet and has an 8⅝-inch water string landed and cemented at 3,141 feet. Texas Co. recompleted two wells in the Santa Fe Springs field. No. 7 on the Mattern lease No. 2 pumped 25 bbls. of 32.8 gravity oil after the hole had been plugged back from 4,798 feet to 4,490 feet. No. 4 Mattern lease No. 3 pumped 144 bbls. of 33.1 gravity oil per day from 4,558 feet but the output was still cutting 20 per cent.

Southwest Texas Fields

(Continued from Page 60)

failure of Parr Oil Co. No. 1-B Welder, in section 102, about a mile southwest of production. In this field, Charles Kleiner No. 1 Chernosky is showing indications of bringing in further production from the Loma Novia sand. The test is in the northern part of the field, and is being completed in sand at 2,693-2,708 feet.

Loma Novia, also in Duval County, received only six new producers during the week, a decided drop from the usual high number. General slackening of activity in this field, due to the drilling up of inside locations, together with the recent rains are responsible for the decline.

To the east, the Loma Vista field, which has had one oil producer and one failure, is receiving two further tests. Shell Petroleum Corp. and Pan American Petroleum Co. are now active in the field, and will attract much interest from lease holders in the area.

In Live Oak County, Adolf Dovre No. 1 San Antonio Joint Stock Land Bank blew out during the week in shallow gas sand at 1,783-90 feet. The test was shut in, and is now shut down on a fishing job.

Interest in the Lower Rio Grande Valley was divided between a Samfordyce test, and wildcats in Starr County. In Samfordyce, the Barlow No. 1 Chapa had cored the new deeper sand at 2,938-59 feet and set casing for an early production test. The deepest Valley test to date, Quintana Petroleum Co. No. 1 Engleman, in the Mestanas area, was abandoned at a total depth of 8,893 feet. Derrick was pulled in several weeks ago while attempting to loosen drill pipe stuck in the hole.

Outlook for the new Voss field in Bee County was darkened by the reported operations of Dirks Brothers No. 1 Bergel, west offset to the discovery well. The second test was reported running low at 4,042 feet.

Detailed report of drilling and completions in the Southwest Texas field will be found in the section devoted to drilling operations starting on page 83.

Eastern Fields

(Continued from Page 70)

and 1,200,000 feet of gas at 1,540-47 feet. In this district, the Fairfax Gas Co. and others deepened No. 3 Leonard Paugh to 4,368 feet. It gauged 75,000 feet before shot but the shot caused a bad casing leak and the hole is being plugged.

In Calhoun County, Southeastern Gas Co. completed a gasser on the F. F. Smith farm in Lee district in the Injun sand at 1,982 feet. It gauged 300,000 feet a day.

In Fayette County, Godfrey L. Cabot, Inc. completed a gas well in No. 7 Kanawha Gauley Coal Co. lease in Falls district, gauging 1,035,000 feet a day at 2,370 feet.

In Gilmer County, F. G. Bish completed a second test on the Joseph Steinbeck farm in Troy district as a gas well at 1,679 feet.

In Ritchie County, Mahaney and Lucas completed No. 7 J. F. and Laura Kelly farm on Bonds Creek, Clay district in Injun sand at 1,950 feet without striking commercial pay.

In Roane County, the Henderson Oil Co. on the L. C. Burdette farm drilled through Salt sand to 1,700 feet, and it was also a dry hole. It is in the Curtis district.

New Work

In Cabell County, Shall Gas Co. is rigging up on the J. A. Harshbarger farm, Big Two Mile Creek, Grant district. On Smith Creek in McComas district, Kentucky-West Virginia Gas Co. is rigging up on the J. B. Bailey farm. On the same waters, R. H. Adkins and others are building a road to a location on the Polly Swann farm.

In Calhoun County, L. P. Bickel is drilling No. 16 Martha Stump, Little Kanawha River, Center district.

In Clay County, South Penn Oil Co. is drilling No. 109 on the O. D. Stockley farm.

In Braxton County, Pittsburgh & West Virginia Gas Co. is down 589 feet on the M. E. Ramsey farm and 600 feet on the W. L. Hopkins farm both in Birch district.

In Gilmer County, Kenny M. Hunt and others have started drilling on the A. L. McClain farm in Center district, and Steer Creek. In Troy district, Jackson and Garrison are drilling on the Alva Bennett farm. Massey and Jarvis are spudding on the John Stalnaker farm. The Chiefton Oil & Gas Co. is drilling on the Daniel Steinbeck farm.

In Hancock County, R. J. Braden Co. is drilling No. 24 Hewitt heirs farm in Grant district. In Harrison County, B. F. Bowman has started drilling No. 2 V. and C. B. Highland farm, Union district.

Kansas Developments

By
DAL DALRYMPLE

WILDCAT IN LINCOLN COUNTY STARTED; OPEN ELLIS AREAS

Wildcat activity in Kansas continues unabated and during the past week several tests that open new pools or extend old ones were completed, while operations were starting at wildcat locations in new areas. In Lincoln County, overlooked by operators in recent months, Otto J. Graham was rigging up at No. 1 Smiley, NW section 26-10-9w, at a location far from production and 6 miles from any previous test well. Location is on a block of leases assembled by Gulf Oil Corp. in northwestern Lincoln County. The hole is to be drilled to 4,200 feet unless commercial production is found above that depth. About 15 tests have been drilled in Lincoln County in the last 20 years, the deepest to about 3,600 feet. All were abandoned, but several had showings of oil that operators believe may have become commercial production if acidized.

Continental Oil Co. and L. H. Wentz were starting a wildcat in northern Reno County, south of Sterling, on a block that was core-drilled by the Continental company. Crown Petroleum Co. has another wildcat location in the Sterling area at No. 1 Van Horn, NE section 13-22-8w. Shell Petroleum Corp. was starting a wildcat test 3 miles south of the Raymond pool in Rice County; Lauck & Seifert are moving in material for a wildcat near the northwest city limits of Wichita, in Sedgwick County; F. D. Williams staked location for a test northwest of Kinsley in Edwards County; Indian Territory Illuminating Oil Co. and Empire Oil & Refining Co. had started work at a wildcat 3 miles north of the Riley pool, in Stafford County, and Lario Oil & Gas Co., Champlin Refining Co. and Frank N. Hamilton were starting wildcats in Ellis County.

Considerable geophysical work is under way in Kansas, with major companies operating both seismograph and core drills in many counties. Crews are at work or have been recently at work in Sedgwick, Wichita, Rush, Rice, Reno, Barber, Harper, Sumner, Hodgeman and Scott Counties.

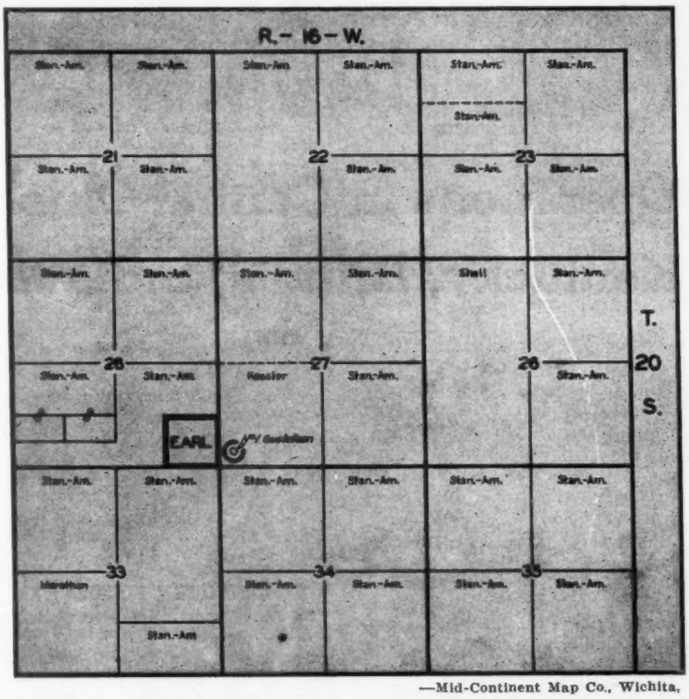
The Kansas allowable production for July was officially fixed at 151,629 bbls. daily by the State Corporation Commission. This is an increase of 6,184 bbls. over the June daily allowable, but is 12,571 bbls. less than recommended by the federal Bureau of Mines.

Reno County

Five new oil wells were completed in Reno County, one old gas well was deepened and found oil pay, and one old well was deepened and abandoned. Largest of the producers was Shell Petroleum Corp. No. 1 Whipple, C E half E half NE section 15-26-9w, in the Lerado pool. Top of chat was 3,864 feet; Viola lime, 4,131 feet; total depth, 4,147 feet. It was acidized with 3,000 gallons and then 8,000 gallons and made potential of 9,093 bbls. of oil, based on a six-hour flow test.

Shell Petroleum Corp. No. 1 Welch "B," C SE SE section 4-24-4w, was acidized and pumped and flowed 1,279 bbls. of oil and 257 bbls. of water in 24 hours. Chat was topped at 3,297 feet; total depth, 3,379 feet. It swabbed 277 bbls. of oil and 48 bbls. of water in 10 hours before acidizing. C. M. Murray and D. J. Wallace No. 1 Scheuchzer, NE SE NW section 20-24-4w, topped chat at 3,332 feet; total depth, 3,382 feet. It pumped 509 bbls. of oil in 24 hours, and after acidizing pumped and flowed 1,419 bbls. in 24 hours. W. C. McBride, Inc., No. 1 Siemens, SW SE SE section 36-22-4w, flowed 288 bbls. of oil in 24 hours before acidizing and flowed 513 bbls. in 12 hours after acidizing, making potential of 903 bbls. Top of chat was 3,257 feet, steel line measurement; total depth, 3,350 feet. Olson Drilling Co. and Shell Petroleum Corp. No. 3 Sabin "B," C SW SE section 13-23-4w, topped chat at 3,250 feet; total depth, 3,381 feet. After acid treatment, it made potential of 455 bbls. of oil, cutting 5 per cent water, with 4,900,000 feet of gas.

Texas Co. No. 1 Collins, C NE NE section 9-24-4w, an old gas well, was deepened 3,379 feet. After acidizing, it pumped 188 bbls. of oil and 50 bbls. of water in 18 hours, and was recompleted. Duwe and others No. 1 Mildren, C SW SE section 24-24-8w, an old well drilled deeper, topped Siliceous lime at 4,221 feet, had a hole full of water at 4,228-31 feet, total depth, and was dry and abandoned.



—Mid-Continent Map Co., Wichita.

Wildcat operators, stampeding over Kansas, again have invaded Pawnee County and Kessler & Their and others have started No. 1 Gustafson, SW cor. section 27-20-16w

New work in Reno County: Frank Hollow and others No. 2 Bartel, SE SW SE section 36-22-4w, rig; W. C. McBride, Inc., No. 2 Siemens, NE SE SE section 36-22-4w, building rotary rig; Continental Oil Co. and L. H. Wentz No. 1 Snook, NE NW SW section 10-22-8w, location; Shell Petroleum Corp. No. 3 Seedle, C N half S half NW¼ section 16-24-4w, building rotary rig; Empire Oil & Refining Co. No. 3 Scheuchzer, NW SE NW section 20-24-4w, location; McPherson Drilling Co. and others No. 2 Mount, NW SW NE section 20-24-4w, rotary rig; Magnolia Petroleum Co. No. 3 Rodgers, NE SW SW section 9-26-4w, rigging up rotary.

Rice County

The largest of four new producers in Rice County completed during the week was in the Hauschild pool. It was Garden Brothers No. 1 Hauschild, SW SW¼ SE section 10-21-7w. Chat was topped at 3,368 feet; total depth, 3,385 feet. It flowed 1,781 bbls. of oil in six hours, making potential of 6,912 bbls.

Continental Oil Co. and others No. 2 Kimple, NE NE NW section 25-18-8w, made potential of 1,796 bbls. after acid treatment. Top of Siliceous lime was 3,133 feet; total depth, 3,158 feet. Same operators' No. 4 Foote, NW NE SE section 7-20-9w, topped Siliceous lime at 3,277 feet; was bottomed at 3,295 feet; acidized with 4,000 gallons and made potential of 407 bbls. of oil. Sinclair Prairie Oil Co. No. 6 Sharp, SE NE NE section 7-20-9w, made potential of 412 bbls. of oil, with 60 bbls. of water, after acidizing. It topped Siliceous lime at 3,151 feet; total depth, 3,277 feet, where water intruded, and plugged back to 3,275 feet to complete. Darby Petroleum Co. No. 2 Johnson, C E half E half SW section 10-21-7w, topped Siliceous lime at 3,787 feet; cored to 3,800 feet; plugged back to 3,480 feet, perforated the casing at 3,462-76 feet, and was dry and abandoned.

The following new work was started in Rice County: Empire Oil & Refining Co. No. 4 Janssen, SW NE NW section 3-18-8w, cellar; Shell Petroleum Corp. and others No. 2 Sherman "B," C NE section 16-19-9w, set 12-inch casing at 175 feet and waiting; Stanolind Oil & Gas Co. No. 5 Mitchell, NE NW SW¼ section 32-19-10w, an old well, found salt water at 3,344 feet, total depth, and plugged back to 3,338½ feet; Hartman & Blair and others No. 2 Schartz, SE NE SE section 33-19-10w, location.

Empire Oil & Refining Co. No. 5 Janssen, NW NE NW section 3-18-8w, topped Siliceous lime at 3,234 feet; total depth, 3,260 feet. After acidizing with 3,000 gallons it made 24-hour potential of 435 bbls. of oil, but had not been completed. Stanolind Oil & Gas Co. No. 6 Mitchell, NW NW¼ SW section 32-19-10w, swabbed 63 bbls. of oil in 50 minutes after topping Siliceous lime at 3,280 feet and drilling to 3,300 feet. Hartman & Blair and others No. 1 Schartz, NE SE SE section 33-19-10w, topped Siliceous lime at 3,310 feet; total depth, 3,320 feet; was acidized, swabbed 160 bbls. of oil in three and one-half hours, but was not completed. Simpson & Noble and others No. 1 Pulliam, C S half N half NE section 35-19-8w, wildcat, drilled to 3,305 feet, total depth, and produced 45,178,000 feet of gas.

Barton County

Two producers were completed in the Barton County sector of the Silica pool. Phillips Petroleum Co. No. 5 Matzek, SW SW NE section 36-19-11w, made potential of 1,483 bbls. of oil. Top of Siliceous lime was 3,275 feet; total depth, 3,395 feet. Mid-Continent Petroleum Corp. No. 6 Schmidt, NE NE SW section

36-19-11w, topped Siliceous lime at 3,278 feet; total depth, 3,287 feet. It made potential of 728 bbls. of oil, cutting 2 per cent water.

One new test was reported in Barton County. Atlantic Oil Producing Co. No. 1 Titus, C SE SW section 30-20-13w, was a location.

Schermerhorn Oil Co. No. 1 Hunter, NE cor. section 29-18-15w, wildcat, gauged 39,000,000 feet of gas daily. It topped LaMotte sand at 3,486 feet; had Quartzite at 3,565-76 feet, total depth, and plugged back to 3,534 feet, but had not been completed. Aylward and others No. 1 Wissman, NW cor. section 31-18-15w, topped sand at 3,562 feet and at 3,584 feet flowed 115 bbls. of oil in 24 hours, but was drilling ahead at 3,598 feet. Magnolia Petroleum Corp. No. 8 F. Steckel, NW SW NE section 1-20-11w, topped Siliceous lime at 3,282 feet; total depth, 3,299 feet, and swabbed at the rate of 35 bbls. of oil an hour. Same operator's No. 6 Meda Steckel, NE SE NW section 1-20-11w, was acidized with 1,000 gallons and made potential of 241 bbls. of oil. Top of Siliceous lime was 3,287 feet; total depth, 3,305 feet.

Estimated Daily Production

Estimated daily average production in Kansas for the week ending July 4, and for the preceding week is as follows:

	Barrels	
	July 4	June 27
Oxford City	5,225	6,025
Burrton	11,550	11,759
Ritz-Canton	6,650	6,175
Hollow-Nikkel	3,800	3,825
Voshell	2,850	2,850
Ellsworth County:		
Lorraine-So. Lorraine	6,550	6,800
Other pools	612	811
Rice-Barton Counties:		
Chase	9,800	9,807
Raymond	2,675	2,664
Silica	9,750	9,471
Keesling	3,375	3,460
Miscellaneous Rice	5,872	5,308
Miscellaneous Barton	2,145	2,636
Russell County:		
Fairport	2,745	2,605
Gorham	2,516	2,725
Russell	1,246	2,335
Sullivan	2,464	2,390
Other pools	5,497	6,698
Sedgwick County:		
Valley Center	1,308	1,330
Greenwich	1,275	1,255
Robbins	1,505	1,455
Eastborough	812	800
Other pools	366	398
Ellis County	1,297	1,233
Kingman County	638	758
Stafford County	2,085	1,493
Greenwood County	10,300	10,100
Butler County	17,980	17,990
Other fields	21,862	20,853
Total Kansas	144,750	146,000

Russell County

Only one new producer was completed in Russell County, an old wildcat was deepened without increasing potential, and two failures were recorded. Shell Petroleum Corp. No. 1 Brown, NE NE SE section 31-13-14w, pumped 200 bbls. of oil and water before acid treatment, and after acidizing made potential of 536 bbls. of oil, with 520 bbls. of water. It topped anhydrite at 920 feet; Topeka lime, 2,758 feet; Oswald lime, 3,030 feet; Conglomerate, 3,282 feet; Siliceous lime, 3,301 feet; total depth, 3,313 feet.

Central Petroleum Co. deepened No. 1 Benso "C," SE SE SW section 9-14-15w an old wildcat, but had a hole full of water at 3,273 feet, plugged back to 3,120 feet and was completed for old potential of 292 bbls. of oil. Gorham sand was topped at 3,263 feet; granite, 3,308 feet.

Billings No. 2 Witt, NE SE SW section 3-14-15w, was dry and abandoned at 3,371 feet, total depth. Top of Oswald lime was 3,062 feet; granite, 3,360 feet. Wakefield and others No. 1 Krug, NE NW SW section 7-15-14w, wildcat, was dry and abandoned with a hole full of water at 3,283-83 feet, total depth. Anhydrite was topped at 845 feet; Oswald lime, 3,040 feet; Siliceous lime, 3,282 feet.

New work in Russell County was as follows: Bridgeport Machine Co. No. 7 Witt, NW NE SW section 3-14-15w, location; Central Petroleum Co. No. 2 Foster "A," SE SW NW section 3-14-15w, cellar.

Phillips Petroleum Co. and Indian Territory Illuminating Oil Co. No. 1 Wineteer, SW SW SE section 19-13-14w, an old well deepened, was acidized with 1,000 gallons, but had not been tested. Before acidizing, it pumped 108 bbls. of oil, cutting 1 per cent water, in 24 hours. It was deepened from 3,018 feet to 3,259 feet. Stanolind Oil & Gas Co. No. 1 Roesner, SE cor. section 9-15-13w, topped Siliceous lime at 3,315 feet, had pay at 3,327-29 feet, and swabbed at the rate of 6 bbls. of oil an hour for three hours. It had an increase at 3,336-38 feet, swabbing 15 bbls. of oil per hour, with 10 bbls. of water per day. It was acidized with 2,000 gallons, but had not been tested.

Ellis County

Three Ellis County completions included two wildcat discovery wells. Jones Brothers & Carpenter and others No. 1 Solomon, SE SE SW section 28-11-19w, opened a new pool in northwestern Ellis County, south of the Zurich area in Rooks County. On completion test it made a daily potential of 600 bbls. of oil. Top of anhydrite was 1,408 feet; Topeka lime, 3,075 feet; Oswald lime, 3,340 feet; Conglomerate, 3,593 feet; Simpson, 3,622 feet; Siliceous lime, 3,629 feet; oil showing in top of Siliceous; total depth, 3,632 feet.

Bridgeport Machine Co. and J. J. Hall No. 1 Madden estate, NE NW NW section 26-15-18w, wildcat southeast of the Ruder pool, was completed at total depth of 3,341 feet. after acidizing, it pumped 152 bbls. of oil in six hours, then made potential of 400 bbls. of oil. Top of anhydrite was 1,150 feet; Topeka lime, 2,935 feet; Oswald lime, 3,260 feet.

Twin Drilling Co. No. 2 Goetz, NE SW SE section 3-14-17w, was acidized with 1,500 gallons and pumped 165 bbls. of oil in 13 hours. It then was treated with 4,000 gallons of acid and made 24-hour potential of 412 bbls. of oil. Top of Oswald lime was 3,264 feet; Conglomerate, 3,509 feet, Siliceous lime, 3,512 feet; total depth, 3,560 feet.

New work in Ellis County included three wildcats and one old well drilling deeper. Champlin Refining Co. and others No. 1 Hadley, SE SW NE section 30-11-17w, wildcat, was moving in material. Lario Oil & Gas Co. and others No. 1 Cress, wildcat, NE cor. section 13-11-17w, was a location. Lario Oil & Gas Co. No. 1 Marshall, NW SE NE section 36-11-18w, wildcat, was a cellar. Margay Oil Co. No. 1 Bemis "A," SE cor. section 16-11-17w, an old well, was rigging up to deepen.

Ellsworth County

Five new operations were reported in Ellsworth County. Empire Oil & Refining Co. and others No. 3 Janssen "B," SW SE SW section 34-17-8w, was a location. Carter Oil Co. and others No. 6 Teubner, SW SW NW section 26-17-9w, was a location; same operators' No. 7 Teubner, NW cor. section 26-17-9w, was a location; same operators' No. 1 Anna, NE NE SE section 27-17-9w, was a location. Smith & Ash and Gulf Oil Corp. No. 3 Shanyo, NE SW SW section 24-17-10w, was drilling below 450 feet.

Rush County

Pryor & Lockhart and others No. 1 Stegman, SW NW NE section 11-16-17w, wildcat in northern Rush County, was dry and abandoned at 3,550 feet, total depth. It topped anhydrite at 1,095 feet; Kansas City lime, 3,261 feet; Siliceous lime, 3,537 feet; water intruded at 3,549-50 feet, and it was plugged back to 3,547 feet without success.

Stafford County

The following new work was reported in Stafford County: Indian Territory Illuminating Oil Co. and Empire Oil & Refining Co. No. 1 Mellies, C N half N half NE section 6-22-11w, wildcat, was moving in material; Empire Oil & Refining Co. No. 1 Keeler, NW NW SE section 3-21-11w, was a location; Atlantic Oil Producing Co. No. 1 Bagley, NW SW NW section 32-22-11w, was a location.

Trego County

Alma Petroleum Co. and McNeely No. 1 Kraus, C SE SE section 15-11-23w, in the Wakeeney area of Trego County, made potential of 459 bbls. of oil, with 25 bbls. of water, after acidizing and was completed at 3,575 feet, total depth. It topped Oswald lime at 3,487 feet; pay at 3,574-75 feet.

McPherson County

Two new operations were reported in McPherson County, as follows: Hutchinson Oil Co. and others No. 8 Eaton, SE SE NE section 26-19-2w, rigging up; Dickey & Talbot No. 1 Vogts, C NE SE section 17-20-1w, was a rig.

Grant County

Piney Oil & Gas Co. No. 1 English, C NW section 3-29-36w, in the Hickok area of Grant County, produced 5,000,000 feet of gas daily and was completed at 2,950 feet, total depth.

(Continued on Page 92)

Central West

Operations in Central Ohio, Kentucky, Illinois, Indiana

By GEORGE A. WHITNEY

FINDLAY, Ohio, July 6.—No wells were reported completed in the Lima field in the past week, while the Central Ohio fields reported three gassers and three dry holes. Ten oil wells were completed in the Western Kentucky fields.

In Ashland County, Ohio, Ohio Fuel Gas Co. completed a gas well on the M. Stanislaweki farm, section 33, Jackson Township. Same company is drilling No. 1 Louis Lasoney, Lot 50, Sullivan Township, and drilling No. 1 Young, section 22, Mohican Township.

In Lorain County, Ohio Fuel Gas Co. No. 1 Zurgana-Cavar is a dry hole at 2,572 feet. It is in Lot 31, Eaton Township, same county. Schneider & Wyles are drilling No. 1 Blanch Heacock, on Lot 6, Ridgeville Township.

In Wayne County, Ohio Fuel Gas Co. No. 1 W. F. Nirode, section 36, Plain Township, is a gas well.

In Summitt County, Brooks Johnson No. 3 Robert Gillie, section 13, Twinsburg Township, was a dry hole at 656 feet. Kime and others No. 1 Jesse L. Carman, section 36, same township, is drilling. East Ohio Gas Co. is drilling No. 1 on the I. Mathis farm, section 36, and No. 1 John Kauffman farm, same section.

In Stark County, Lyons & Co. No. 1 on the Ellen Bergen farm, section 11, Perry Township, was a gas well. In Cuyahoga County, L. T. McGrath has a rig on the Bradford and Averill lots in the city of Cleveland.

In Perry County, Ohio Fuel Gas Co. No. 1 on the F. G. Rhodes property is a gas well at a depth of 3,234 feet.

In Hocking County, City Natural Gas Works No. 1 Ellen Oliver, section 6, Marion County, was a dry hole at 2,580 feet. Preston Oil Co. is drilling No. 120 on the S.C.C. Co., section 6, Ward Township, and the same company has a rig for No. 133, same township. The Charleston Gas Co. is drilling No. 1 on the Jacob Kepler farm, section 12, same township.

KENTUCKY FIELDS

In Ohio County, Kentucky, Petroleum Exploration No. 8 Romney Hazel Graham produced 10 bbls. initially in the Dundee pool. Kentucky Natural Gas Co. No. 16 Nannie Rodgers and others produced 40 bbls. initially. Vickers & Co. No. 10 on the Sally Jones farm, in the Oak pool, was a dry hole. In the Webster pool, in Ohio County, Teller and others, on the A. H. Medcalf farm, produced an initial of 15 bbls. In the same county, Cane Run Petroleum Co. No. 9 A. F. Bellamy farm, in the Deanfield pool, started at 60 bbls. Kentucky Natural Gas Co., in the Dundee pool, started at 8 bbls. F. D. Clark & Co. No. 1 on the Maggie White farm, in the same pool, produced 10 bbls. initially. Rough River Corp. No. 2 on the Louisville Joint Stock Land Bank, was a dry hole.

In Henderson County, Imperial Oil & Gas Products Co. No. 4 on the Aaron Freeman farm, Niagara area, produced 10 bbls. Hupp & Duff No. 6 on the Tanner tract, in McLean County, produced an initial of 90 bbls.

In McLean County, J. C. Miller No. 3 on the James Henninger farm produced 5 bbls. Hupp & Kentucky Producers No. 1 on the Mary Wilson farm produced 30 bbls. initially.

West and North Texas

By L. E. BREDBERG

GAINES COUNTY DEFINITELY PROVEN PRODUCTIVE OF OIL

FORT WORTH, Tex., July 6.—Gaines County, which has had a lone gas well shut in for the past few months, located about 3 miles north of Seminole, has joined the oil producing counties in the West Texas Permian Basin. The Landreth Production Co. of Fort Worth is discoverer of the new field, with a well on the Kirk ranch, in section 22, Block A-21, P.S.L. Survey, about 9 miles southwest of Seminole, the county seat.

The strike comes just in time to seal contract with bottom-hole contributors who were to pay off in case the test found commercial production by July 1. The contract was fulfilled by Landreth when the well swabbed 107 bbls. of oil in 24 hours following a 1,000-gallon dose of acid and a second dose of 3,000 gallons. The first treatment did little good, but the second treatment increased the 28 gravity oil in the hole materially. Total depth is 4,820 feet, or 505 feet in the lime and 1,549 feet below sea level.

The first 16 hours following the second acid treatment the well swabbed 68 bbls., after the oil load and acid were cleaned from the hole. Following the first 1,000-gallon acid treatment it swabbed only 2½ bbls. of oil per hour. The gas is not sufficient to flow the well, which has been temporarily completed, but may be carried deeper in search of higher porosity in the lime. Many are of the opinion that it is an edge well and that better producers will be found later as other tests are drilled in the area. No offset locations have been reported.

Seven miles northwest of the Kirk discovery, the Humble Oil & Refining Co. No. 1 Eubanks, in the SW cor. section 6, Block AX, logged the salt about 200 feet higher than the Gaines County discovery. The salt in the Eubanks was topped at 1,842 feet, or 1,523 feet above sea level. Anhydrite was logged at 1,790 feet. Casing has was logged at 1,790 feet.

Spudded on Wildcat

Grisham-Hunter Corp. of Abilene, which some time ago staked location in the NW cor. section 24, Block 73, P.S.L. Survey, in southwest Andrews County, and about 8 miles north of a small producer in the northwest corner of Ector County, spudded in with a machine and then shut down to drill a water well. As this location is on a northwest trend in continuation of Ector County production, it will be an extremely and closely watched test.

Means Pool

The Humble Oil & Refining Co. has staked location for No. 9 J. S. Means, in the NE cor. section 22, Block A-35, about 2 miles south of the nearest production in the Means pool and 1 mile south of the nearest drilling test. If it proves a producer it will mean the expansion of the field to nearly 7 miles from the southeast to the northwest, the Humble company holds the bulk of the acreage in the field, and was the discoverer of it.

Goldsmith-Scharbauer-Cummins Area

Representatives of companies and independents owning oil wells and acreage in the Goldsmith-Scharbauer-Cummins area in northwest Ector County, met with the Railroad Commission at Austin on July 3 to discuss further regulations and proration of that far-flung producing area and trend. Rules proposed call for 40-acre units, with wells 880 feet apart and 440 feet from property lines, to provide flexibility for more than one well to 40 acres if permeability of the lime pay zone requires it. The proration plan will be based 50 per cent on potential and 50 per cent on acreage, with the 40-acre units, if adopted as proposed. One company wanted six-hour potential tests taken on new wells instead of the present 24-hour potential tests.

Rig Builders Strike Settled

The rig builders strike, which has been in force for nearly three weeks in West Texas and southeastern New Mexico, was reported to have been called off this week when builders and contractors compromised. The builders have been asking for $14 per day and $16 per day for foremen. An agreement was said to have been reached when the builders elected to take $13 per day, $15 going to foremen. This strike has caused a cessation in work for the past three weeks, but with 43 locations staked in West Texas this week, new work will be on the increase.

Jones and Taylor Wildcats

Locations were staked for two new Jones County wildcats this week and two in Taylor County. Five miles northwest of View, and about 12 miles southwest of Abilene, Taylor County, Illinois Petroleum Co. of San Antonio has staked location for a 2,500-foot test on the Mrs. G. A. Bigham lands, in Subdivision 29, Guadalupe County School Lands Survey, League 121.

The other wildcat location for Taylor County was staked by Dunn and McAlister on the Mrs. M. Bowles estate in section 28, Blind Asylum lands, about three-quarters of a mile southwest of an old test drilled in 1927 by the Vacuum Oil Co., which was abandoned at 2,390 feet after picking up oil showings at 1,950 and 2,150 feet. It is to go to 2,350 feet.

The Jones County wildcats are to be drilled by the Owens-Snebold Oil Corp. of Fort Worth and H. O. Wooten of Abilene. The former company is to sink a 2,600-foot test about 7 miles northwest of the Hawley field, on the north edge of the townsite of Truby, on the L. Jones lot in the center of a block of 1,800 acres. Location is in Lot 1, J. W. McKissick Survey No. 208. Frank Oyster of Abilene, geologized the block for the company.

The other wildcat is to be located 1 mile south of Anson on lands of Mrs. A. G. Poindexter, and in section 9, M.P.&P. Survey, near the center of a block of some 2,000 acres. This location is about 2 miles northwest of a test drilled last year, which made some oil but was abandoned at 2,504 feet.

Glasscock County Wildcat

Floyd B. Dodson and B. A. Duffy have spudded in their wildcat on the J. G. Carter estate in the SE cor. section 8, Block 33, Township 3e, T.&P. Survey, Glasscock County, about 7 miles north of Garden City and 2 miles northeast of the Fleetborn Oil Corp. No. 1 Dodson, which was abandoned about six weeks ago at a total depth of 3,247 feet after encountering good showings of oil, later running into sulfur water.

The Post sector of Garza County is now drawing more attention, with another small well being completed south of the town this week by M. L. Richards in section 5, Aycock Survey. The Honolulu Oil Corp. has just taken a large block to the northwest of the producing area and the Magnolia Petroleum Co. has been checkerboarding acreage, with Obie Bristow of Big Spring also taking a block in the area. The new well made 78 bbls. at a total depth of 2,920 feet in lime. Elevation is 2,528 feet.

The Henderson extension area north of the main Hendricks field in Winkler County has been provided with a 10-acre spacing rule by the Texas Railroad Commission. Two casing programs are provided, one of which will permit the operators to produce gas along with the oil through a bradenhead and the other requiring a second string of casing to be set and cemented in the Rustler lime. This pool has seen the recent completion of the most prolific oil wells in the county, which has caused it to be segregated from other nearby producing areas and given separate regulations for its development and production.

There were 43 locations staked in the West Texas district this week, even a greater number than in the East Texas field, which had led the entire state for the past five years. Only 24 completions were reported for the Permain Basin this week.

North Central Texas

The feature in North Central Texas this week was the completion of a good well by the Texas Co. on the Mrs. R. A. Stephens lands in section 1,985, T.E.&L. Survey, about 5 miles northeast of Graham, and 1 mile west of a well completed in 1933 by the company on its 2,350-acre block. The new well flowed 680 bbls. of high gravity oil after the lime was acidized from 4,057-83 feet, with 4,687,000 feet of gas. The former deep producer only made 140 bbls., but it was not acidized. Young County, in which this new extension was completed, has been one of the most interesting from a deep drilling standpoint, operators and companies getting some good deep wells and opening more territory to deep exploration. Deep drilling has increased the number of activities in the county by a large margin within the past few months. However, a disappointment was registered in one area in the county in the past week when the Associated Developers Co. No. 1 Terrell, in Block 258, T.E.&L. Survey, proved a dry hole from the 2,990-foot sand and was ordered abandoned.

Pois and Schultz have spudded a wildcat test 2 miles south by east of the Hirschi pool in Wichita County, to carry it to 2,300 feet in section 1, H.&G.N. Survey. Another wildcat for this area is to be drilled by Fagadau, Clark & Cowden on lands of Mrs. C. T. Marshall, in the James Cole Survey. It, too, will go to 2,300 feet. Location is about 1½ miles west of the Hirschi pool.

Montague Deep Test

The Sinclair Prairie Oil Co. has set 400 feet of surface pipe on its No. 1 C. Holt, located in the northwest corner of Block 45, Kaufman County School Lands Survey about 12 miles northeast of Nocona in Montague County. This test is scheduled to go to 4,000 feet, with other reports stating that it will be carried 2,500 feet deeper in quest of Ellenberger production. The area was "shot" with instruments and an interesting high located, resulting in this test.

NORTH CENTRAL TEXAS COMPLETIONS

Archer County

Brown & Kriss No. 2 G. R. Campbell, 1,092-97 feet, 20 bbls. L. T. Burns No. 1 S. B. Herron, 1,144 feet, dry. Consolidated No. 1 W. H. Portwood DD, 1,428-37 feet, 295 bbls. Continental Oil Co. No. 1 C. Cowan, 1,112 feet, dry. Hunter & Consolidated No. 1 Richardson, 1,503 feet, dry. C. B. Long No. 11 J. H. Turbeville, 1,489-1,526, 12 bbls.

Kittery Oil Co. No. 2 Junker & Kunkel, 1,275 feet, dry. McLaughlin and others No. 1 Lemons, 845 feet, dry. Nelson & Tucker No. 3 H. Ford, 900-1,002 feet, 10 bbls. Phillips & Healey No. 3 J. C. White, 705 feet,

dry. Shappell Oil Co. No. 1 Mrs. M. A. Demoss, 1,265 feet, dry. Solo Oil Co. No. 1 E. A. Hauster C, 1,155 feet, dry. Earl M. Stilley No. 1 H. O. Prideaux, 710 feet, dry. E. J. Stump No. 8 Wilson, 1,530 feet, dry.

Clay County

Golding & Cochran No. 1 Ben Nutter, 2,403 feet, dry.

Cooke County

Anderson & Kerr No. 2 F. A. Bruhlmeyer, 2,018-22 feet, 768 bbls.; No. 1 A. Wilson, 2,390 feet, dry. Hardin Oil Co. No. 1 J. G. Bonner, 2,308 feet, dry. Harrison-Dillard No. 6 R. W. Trew, 1,137-1,236 feet, 175 bbls. C. Newburn No. 1 Dotson, 1,710 feet, dry. J. C. Shaffer No. 1 Ed Wilson, 2,060-69 feet, 782 bbls. Woodbine Oil Co. No. 1 C. C. Potter, 997 feet, dry. Mudge Oil Co. No. 14 Johnson, 1,050-1,120 feet, 27 bbls. Vindicator Oil Co. No. 7 Walterscheid, 775-95 feet, 10 bbls.

Jack County

Compton Oil Co. No. 4 Henderson, 340-46 feet, 6 bbls. Lewis Production Co. No. 2 Birdwell, 2,974-99 feet, 50 bbls. George B. Ray No. 2 Hester, 2,985-3,006 feet, 350 bbls. oil, 300,000 feet of gas.

Montague County

Arco Oil Co. No. 4 Salmon D, 985-999 feet, 20 bbls. Continental Oil Co. No. 30 N. J. Howard, 1,372-1,418 feet, 33 bbls. Southwest Petroleum Co. No. 1 W. S. Petty, 60 feet, dry.

Wichita County

Douglas Production Co. No. 25 L. P. Douglas, 312 feet, dry. King Oil Co. No. 10 Waggoner H, 1,976-85 feet, 400 bbls. Rathke Oil Co. No. 10 Murry, 855-62½ feet, 20 bbls. Texas Co. No. 427 Waggoner A, 1,079-91 feet, 8 bbls. Waggoner Refining Co. No. 8 Waggoner AA, 1,590-1,602 feet, 110 bbls.; No. 9 Waggoner AA, 789-98 feet, 60 bbls.

Wilbarger County

Barkley & Meadows No. 18 Waggoner C, 1,861-93 feet, 60 bbls. Fain & McGaha No. 13 Waggoner Y, 2,392-2,400 feet, 40 bbls. King Oil Co. No. 4 Waggoner N, 1,538-47 feet, 125 bbls. Lido Oil Co. No. 12 Waggoner C, 2,731-39 feet, 15 bbls. Phillips Petroleum Co. No. 3 Waggoner V, 2,340-51 feet, 30 bbls.

Young County

Alexander & Beavers No. 5 Hamilton, 894-902 feet, 45 bbls. Burns & Stilley No. 1 J. D. Spencer, 864 feet, dry. Duncan & Holt No. 14 Benson, 901-07 feet, 250 bbls. Golding & Cochran No. 1 E. E. Hall, 756 feet, dry. dry.

Texas Co. No. 1 Stephens, 4,057-83 feet, 637 bbls. oil, 4,500,000 feet gas. Norma Wagner No. 1 W. B. Howard, 1,041 feet, dry. R. J. Watson No. 2 Watson, 700 feet, dry. McLester & Lupton No. 1 G. M. Gibson, 3,604-19 feet, 467 bbls.

PANHANDLE COMPLETIONS

Gray County

Claude Drilling Co. No. 1 Huff, 2,580-3,289 feet, 19,800,000 feet of gas. Empire Gas & Fuel Co. No. 8 Cunningham, 3,220-3,259 feet, shot, 848 bbls. on pump. Magnolia Petroleum Co. No. 3 Barrett, 3,210-3,246 feet, shot, 378 bbls. on pump; No. 14 Harrah, 3,152-3,280 feet, 405 bbls. on pump. Southwest Production Co. No. 2-A Cobb, 2,460-3,299 feet, 32,000,000 feet of gas. Stanolind Oil & Gas Co. No. 9-B Cobb, 3,241-3,287 feet, shot, 645 bbls. on pump.

Hutchinson County

Crosbie, Inc., No. 12 Pitts, 2,860-2,983 feet, shot, 745 bbls. on pump. Gulf Oil Corp. No. 59 Dial, 2,960-3,065 feet, 198 bbls. of oil and 30 bbls. of water per day on pump. Niapa Oil Co. No. 2 Haile, 2,950-3,091 feet, shot, 451 bbls. on pump.

Wheeler County

Dumar Oil & Gas Co. No. 3 Grogan, 1,650-2,632 feet, 33,700,000 feet of gas. Skelly Oil Co. No. 3 Belew, 2,420-2,555 feet, shot, 20 bbls.

Oklahoma Fields

(Continued from Page 69)

5,960 feet; Chattanooga, 6,650 feet; Sylvan, 6,750 feet; Viola, 6,800 feet; Dense, 6,837 feet; first sand, 6,940-85 feet.

McClain County

Arab Petroleum Corp. abandoned No. 1 E. Autry, NW cor. section 16-7-3w, wildcat near Washington in McClain County, which was dry at 8,775 feet, total depth. This test was beset with fishing jobs, cavings and other troubles.

Carter County

Completions in Carter County included four small oil wells and one gasser. Ben G. Barnett No. 4 Lynn, C N half NE section 31-1s-2w, had several sand series and was completed at 1,732 feet, total depth, as a 60-bbl. pumper. Phillips Petroleum Co. and others No. 2 Byrd, SE SW SW section 4-2s-2w, pumped 15 bbls. of oil and 2 bbls. of water and was completed at 1,686 feet, total depth. Shell Petroleum Corp. No. 4 Higgins SE NW SE section 6-2s-2w, had several sands from 1,470 feet to 2,048 feet, total depth. It sprayed 2½ bbls. of oil per day, but produced 15,000,000 feet of gas and was completed as a gasser. Cox & Hamon No. 1 Sina Wilson, NE NW NW section 9-2s-2w, had several sands, was bottomed at 1,800 feet, and pumped 5 bbls. of oil in 24 hours. Louis Sikes, Inc., No. 5 Byrd, NW SE SW section 4-2s-2w, was dry and abandoned at 1,524 feet, total depth. Coline Oil Co. No. 1 Higgins, SW SW NE section 7-2s-2w, an old well, was deepened from 1,836 feet to 1,840 feet, pumped 12 bbls. of oil in 24 hours and was recompleted.

Two new operations were reported in Carter County. Louis Sikes, Inc., No. 2 J. R. Brady, NW SE SW section 19-1s-2w, was drilling below 800 feet. Skelly Oil Co. No. 2 Blair, NW NE SW section 9-2s-2w, was drilling below 350 feet.

Love County

J. B. Russell and others No. 1 Scott, SW SE SW section 29-8s-2e, wildcat in southern Love County, was dry and abandoned at 4,968 feet, total depth.

Stephens County

Completions in Stephens County included two small pumpers and two failures. George Pace and others No. 6 Payne, NE NE NW section 28-2s-7w, had sand at 1,272-89 feet; total depth, 1,301 feet; plugged back to 1,289 feet and pumped 20 bbls. of oil in 24 hours. Mudge Oil Co. No. 7 J. Anderson, SE SW SW section 10-3s-5w, had sand at 325-40 feet, total depth, pumped 5 bbls. of oil in 24 hours and was completed.

T. H. McCasland No. 1 J. C. Parker, NE NE SW section 2-1n-6w, wildcat northeast of Duncan, was dry and abandoned at 2,518 feet, total depth, in shale. Skelly Oil Co. No. 7 Ed Martin, SW SE NW section 36-1s-5w, had a hole full of water in sand at 833-37 feet, total depth, and was dry and abandoned.

Tillman County

Eugene Skinner No. 1 Rilling, SE SE NW section 22-1s-15w, wildcat in northeastern Tillman County, had spudded with machine.

Jackson County

S. W. Hardwick No. 1 Grimes, SW NW SE section 14-1n-20w, in the Altus area, Jackson County, was dry and abandoned at 1,601 feet, total depth, in brown shale.

Gulf Oil Corp. No. 3 C. H. Edwards, NW NE SE section 3-1n-20w, was rigging up rotary.

Creek County

Kirchner and others No. 1-A Morrison, CWL SW SW section 16-17-8, Creek County, produced 3,000,000 feet of gas and was completed. It had Bartlesville sand at 2,795-2,815 feet; total depth, 2,816 feet, and plugged back to 2,815 feet. Saco Oil Co. No. 3 Leader, NE SE SW section 15-8-8, topped Bartlesville sand at 2,709 feet; total depth, 2,780 feet, and pumped 20 bbls. of oil in 24 hours. Young No. 1 Williams, SE SE NW section 27-18-8, pumped 4 bbls. of oil in 24 hours from total depth of 2,602 feet.

Only one new test was reported in Creek County. Curtis Oil Co. No. 1 Quinlan, SW SW SE section 20-18-9, was rigging up machine.

Okmulgee County

Hazlett No. 6 Dunbar, C E half SW SW section 30-14-13, in Okmulgee County, swabbed 30 bbls. of oil in 24 hours from Dutcher sand at 1,937-55 feet and was completed. Ladd No. 1-A Town, CEL SW NW section 27-15-14, had sand at 1,682-1,700 feet, and pumped 6 bbls. of oil in 24 hours, completed.

Tulsa County

Gilmore Oil Co. No. 1-A Clinton, SE SW SE section 32-19-12, in the Red Fork area, Tulsa County, was dry and abandoned. It had Turkey Mountain sand at 2,316-2,347 feet; plugged back 7 feet and acidized, and plugged back again to 1,678 feet, without result.

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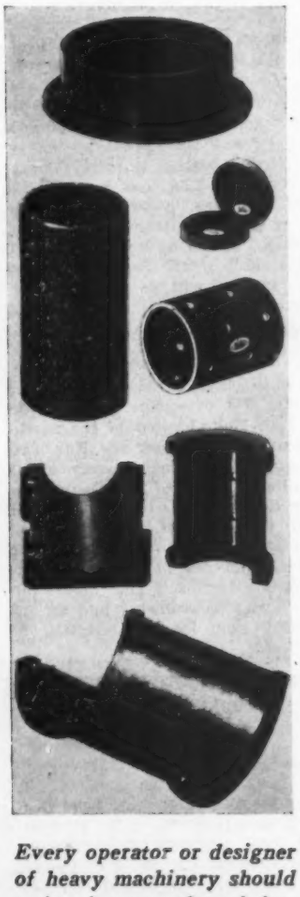

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Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, July 3. — On the west side of the South Turner Valley structure, Turner Valley Royalties No. 1, Ed Thompson lease, LSD 15, section 28-18-2w5, is maintaining a steady light crude production in excess of 855 bbls. a day. The crude is between 43 and 45 Beaume gravity of a mixed paraffin and naphthalene base. Some rotary water has been coming with the oil but this is gradually decreasing, with a corresponding increase in the actual oil flow. The accompanying gas flow is between 2,000,000 and 2,500,000 feet a day. Production comes from 428 feet in the Madison limestone, the hole bottoming at 6,824 feet.

The strike tends to confirm the theory held by a number of operators that the "mother pool" of oil from which the naphtha and wet gas of the older Turner Valley field is derived lies on the west flank of the structure. This theory was based on the isolated strikes of high grade crude secured in Model Oils No. 1 in North Turner Valley and the Miracle well in South Turner Valley, both on the west side of the structure and several miles apart. Turner Valley Royalties No. 1 is several miles south of the Miracle well and somewhat lower on the west flank.

Following a suggestion of C. C. Ross, minister of lands and mines, Turner Valley Royalties No. 1 is installing 3-inch tubing with a view to conserving gas and increasing the flow. Contracts have also been let for storage tanks. Two 2,000-bbl. tanks are being installed now, and others will be added later. The modern type tanks are expected to retain the lighter ends, improving the gravity of the crude. If this goes over 45 gravity, the price will be increased from $1.55 to $2.12 a barrel. Since the well started production the gravity has increased from 41.5 to nearly 45 degrees.

Land Withdrawn From Filing

The Alberta government has withdrawn from filing privilege all its acreage remaining open in Township 18-2w5. While the amount of acreage involved was not revealed, it is not large in view of the heavy filing by private concerns before the order became effective. Most of the acreage on this portion of the west flank is held by Calgary & Edmonton Corp. and other companies and by private individuals. Similar action was taken by the provincial government last year when Ranchmen's Gas & Oil Co. No. 1 on the Aldersyde structure, east of Turner Valley, got encouraging shows of crude at depth. With all acreage in Township 18-2w5 taken up or withdrawn, heavy filing has been taking place in Township 17-2w5, immediately to the south.

The strike has given an impetus to deep drilling operations on the west flank of the structure. W. Fay Becker and associates of Calgary, with Seattle and Vancouver interests, have arranged for completion of Richfield Royalties No. 1, LSD 12, section 28-18-2w5. This test is about 1,500 feet south of Turner Valley Royalties No. 1, and has been standing at 4,010 feet. Steel derrick will be used, with heavy duty rotary equipment. Sunburnst-Mid Royal No. 1, LSD 14, same section, will also be completed by the W. Fay Becker interests from 1,660 feet.

R. A. Brown of Calgary, president of Turner Valley Royalties, has arranged with R. W. Brown of Gleichen, Alberta, for development of acreage in S half LSDs 11 and 12, section 28-18-2w5. Farther south, Renfrew Royalties No. 1 Morris & Goodfellow, LSD 3, same section, has finished a fishing job and is rerunning 8-inch casing before deepening with 6-inch hole from 6,020 feet. It got the lime at 6,005 feet and should get production around 6,500 feet. Roy Widney is in charge of operations.

British Dominion Oil & Development Corp. No. 4, LSD 6, section 28-18-2w5, is deepening in the black lime below 6,392 feet with no important increase in wet gas. West of section 28, a Kindersley, Saskatchewan, syndicate headed by B. A. McEwan is arranging for development of acreage in LSD 1, section 29-18-2w5, south and west of Renfrew No. 1.

South Turner Valley

In section 21-18-2w5, Highwood-Sarcee Oils No. 2, LSD 1, got the Madison limestone at 5,700 feet and cemented casing at 5,717 feet. It got a strong show of light crude in the Dalhousie sand, and may be a commercial producer from that horizon, but the oil was cased off to deepen to the porous horizon of the Madison. The test is the farthest south active drilling in the field. In the same section, Sovereign Royalties' No. 1 Myers & Wright, LSD 14, offsetting Highwood-Sarcee No. 1 producer to the west, has rotary outfit rigged and is resuming from 2,333 feet.

In section 20-19-2w5, Home Oil Co. No. 6 is pulling casing and abandoning the hole.

Turner Valley Quotas

C. C. Ross, minister of lands and mines for Alberta, has announced that new quotas for Turner Valley wells will be issued by about July 15.

Aldersyde Area

In the Aldersyde-De Winton area, east of Turner Valley, Arca Development Co. No. 1, NW section 24-18-1w4, is below 2,995 feet.

In the De Winton section, Wales Petroleum No. 1 Anglesey-Lakeview, LSD 1, section 22-21-1w5, is rigging to resume from 4,500 feet with rotary.

(Continued on Page 91)

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East and East Central Texas

PALUXY SAND DISCOVERY IN HOPKINS COUNTY IMPORTANT

By
L. E. BREDBERG

DALLAS, Tex., July 6.—Another wildcat Paluxy sand strike is looming in the East Texas district, the Fault plane, on which the Paluxy sand field at Talco in northwestern Titus and northeastern Franklin County is located, being the scene of this second deep strike, in Hopkins County.

About a month ago Dilworth S. Hager, consulting geologist, and Leon Russ and W. P. Luse, independent operators, all of Dallas, started a test on the J. E. Worsham lands in the northeast corner of the Alex O. Wetmore Survey. Hager and others had drilled a couple of dry holes in this immediate area, making production from the Woodbine sand. The new test is about 1,000 feet north of one of the dry holes which was carried to 3,580 feet.

After production was found in the Paluxy sand at 4,208 feet in the Talco pool, about 18 miles northeast of this new strike, Hager and his associates came to the conclusion that although the Hopkins County structure did not pay off from the Woodbine sand, it might produce from the upper member of the Trinity, the Paluxy, and consequently started this deeper hole, which is now bearing out their faith in the area.

Good Core Showings

The first core showing saturated sand was taken at 4,460-63 feet, and from there to the present total depth, 4,500 feet. Casing has been set and cemented at 4,425 feet. About 20 feet of highly saturated sand has been cored, the oil found in the sand showing a better appearance (higher gravity and better color) than the Talco Paluxy sand crude. Feeling confident that they have a well when drilled in, the operators did not even make a drill stem test. It will probably be about July 7 before the plug is drilled and a test made to determine the potentiality of the well, which is destined to open up Hopkins County's first producing area, about 19 miles northeast of the county seat, Sulphur Springs, which in turn is about 80 miles northeast of Dallas.

Top of the Paluxy has not yet been determined in the test, but elevation is 440 feet, and one report stated that the Paluxy had been entered at around 4,360 feet. Determinations will be made later.

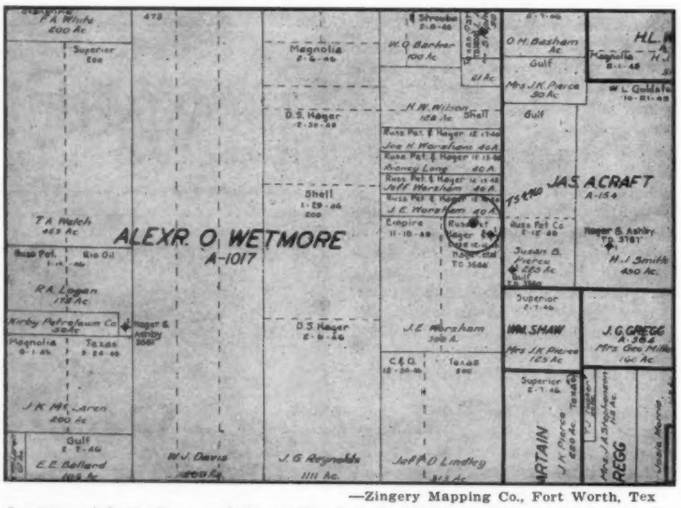
There is but little royalty, and only a few leases, left in the area, and these are being held at very high prices, amounting to nearly as much as might be asked for proven productive acreage. A good part of the royalty held in the area is of the short-term variety, which is not out of the ordinary in East Texas, but is not the general rule in the greater part of the state. This was one reason why Hager and associates drilled as soon as they did to test their holdings.

The Empire Gas & Fuel Co. holds a 150-acre lease to the west of the 150 acres on which the test is located. Hager, Russ and Luse hold other offset acreage, G. C. Tisdale holds acreage near the test, and among others holding leases in the area are Superior of California, Shell Petroleum Corp., Texas Company, Magnolia Petroleum Co., Sun Oil Co. and C. & G. Oil Co.

Will Extend Exploration

The new Paluxy sand strike will spur on exploration between this location and the Talco field to the northeast, and will also increase leasing and royalty buying and cause the drilling of wildcat wells along the fault to the west, especially in the Peerless area in western Hopkins County, where a heavy and high priced wildcat lease play has recently been taking place on a good looking geological feature; at Commerce in eastern Hunt County, where a large block was procured this year and on which the Stanolind Oil & Gas Co. acquired "shooting" rights, and to the southwest of Commerce around Campbell, in the same county, where another large block was taken and where leases and royalties rapidly changed hands the forepart of the year at high wildcat prices. Showers & Moncrief and the Superior Oil Co. obtained the bulk of the acreage in the area, whereas Fred Guthrie and M. J. Delaney blocked the Commerce acreage.

The Talco strike opened a vast fault plane leasing program that swept from Bowie County to the west and southwest back through Navarro and Limestone Counties where the first fault line production was found in eastern Texas. Acreage near the fault, covering a strip about 2 miles wide, or a mile on each side of the fault, was leased nearly in its entirety through Franklin, Hopkins, Hunt, Kaufman and into Navarro and Limestone Counties. There have been innumerable Woodbine sand tests drilled along this plane, all of them proving dry except in Limestone where the old Mexia field was proven as the largest in that county, and in Navarro County where the Powell field was opened about 12½ years ago. The Mexia field is about 15½ years old. Trinity sand production has been sought in Mexia, three tests showing considerable amounts of the deeper oil and gas, but none of them proving commercial producers.



—Zingery Mapping Co., Fort Worth, Tex

Location of Luse, Russ and Hager No. 1 J. E. Worsham wildcat, about 18 miles southwest of the Talco field, which looks like a discovery for Hopkins County and a new Paluxy sand field for the East Texas district

Location of New Strike

The new strike in Hopkins County is located about 7 miles north of the St. Louis and S. W. Railway, the nearest point being Weaver, where a loading rack and connecting line will probably be laid when production is assured. E. B. Germany of Dallas, who has leases and royalties in the area, and who recently sold his quarter interest in a gathering system and loading rack at Talco, has signified his intention of laying such a line from the new area. The Gulf Oil Corp.'s pipe line division's main line system from Oklahoma to the Gulf Coast passes within a short distance of the new strike, the nearest pumping station being at Saltillo on the east edge of Hopkins County, about 9 miles southeast of Hager and others well.

Sulphur Springs, county seat of Hopkins County, has been the headquarters of many independent operators and company men, consequently is now headquarters for most of those coming into the area since the striking of the oil sand was reported. Population of Sulphur Springs is a little better than 5,400. It is located on the main highway from Dallas through Greenville east to Mount Pleasant and Texarkana, and is also located on the St. L. & S. W. Railway. It lacks hotel and rooming house accommodations, consequently many will be forced to stay at Mount Vernon to the east, Greenville to the west, or Mount Pleasant, which is now district headquarters for many company men and independents.

Talco Field

Only one location was reported for the Talco field this week, Magnolia Petroleum Co. staking it on the C. L. Owings tract in the McKinney and Williams Survey in Franklin County, southwest of a couple of oil wells. One test about 1½ miles south of the discovery well was proclaimed a dry hole, the second to be drilled on the lease by Jules Alford. Total depth was 4,346 feet, with top of the Paluxy cored at 4,328 feet. It is on the Fry lands in the I. P. Stern Survey.

Bond & Werby No. 1 T. J. Sanders, in the W. F. Dyer Survey, on the east edge of Franklin County, and about midway between Talco field producers to the northeast and the Bateman potential producer to the southwest, drilled to 4,344 feet, Paluxy sand, and set and cemented casing preparatory to making a swabbing test. It should prove a producer.

Jones and Shelburne No. 1 Hazelwood, located in the northwest corner of the I. P. Stern Survey, about 1½ miles south of the nearest production, showed 1,000 feet of salt water and 30 feet of oil in 12 hours after plug was drilled and a swabbing test was made to total depth of 4,351 feet, and the test does not look encouraging, possibly being too far south of the fault, as was the Alford Nos. 1 and 2 Fry, about 1 mile due east. Top of Paluxy in the Hazelwood test, was cored to 4,285 feet. Elevation is 342 feet.

Discovery Recompleted

The Talco discovery well was officially recompleted this week at a total depth of 4,260 feet, to where it was carried with cable tools from past discovery depth at 4,208 feet. Its initial production at 4,208 feet was reported as 552 bbls. in 24 hours, on pump, and the recompleted initial was 725 bbls. in 24 hours, pumping and flowing, showing from 1 to 5 per cent salt water, which was said to be coming from behind the casing and not from the bottom of the hole. Housh & Thompson, two of the owners of the discovery well, have per-

(Continued on Page 91)

Rocky Mountain Area

By T. R. INGRAM

SUNDANCE PAY EXTENDED IN LANCE CREEK, WYO., DISTRICT

DENVER, Colo., July 6.—The South Park Oil Co. No. 1 State, the discovery well in Park County, Colorado, had more gas after casing off the oil and gauged 2,880,000 feet a day. The Indian Territory Illuminating Oil Co.'s test on Beecher Island, Yuma County, is rumored to have cored saturation in the Dakota and Morrison and to be troubled with gas.

The Lance Creek field in Wyoming had another surprise when the Continental Oil Co. No. 2 Apex-3, a mile and a half east of production, tested 50 bbls. an hour through the drill stem from the basal Sundance. Two small wells were completed in the Osage field.

The Montana-Dakota Utilities Co.'s discovery well in eastern Montana is reported to have swabbed 20 bbls. of oil an hour after successfully plugging off water. Four wells were completed in the Cut Bank field, one for 19,000,000 feet of gas and the Cobb & Pardee No. 1 Stufft, 1¾ miles ahead of production, for 9,000,000 feet after plugging back. The Texas Co. third wildcat in the Valier area was plugged and abandoned. Four wells were completed in the Kevin-Sunburst field.

The Continental Oil Co. completed a 50-bbl. well in San Juan County, northwest New Mexico.

NEW MEXICO

The biggest producer completed during the week in Southeast New Mexico was Texas Co. No. 1 State "K," C SE SE section 18-19-37, in the Monument area. It flowed 3,624 bbls. of oil naturally through tubing in 24 hours from pay at 3,885-4,000 feet, total depth.

Oilwell Drilling Co. No. 2 State "A," C NW NE section 29-19-37, in the Monument area, had pay at 3,870-3,960 feet, total depth, completed. It was acidized with 2,000 gallons and 3,000 gallons and flowed 1,440 bbls. of oil through tubing in the first 24 hours. Gas gauged 1,250,000 feet. Ohio Oil Co. No. 4 State-Elliott, C SE SE section 30-19-37, was acidized and flowed 2,400 bbls. of oil through 1-inch tubing choke in 24 hours. It had pay at 3,892-3,933 feet, total depth. Sun Oil Co. No. 6 Weir, C NW NE section 35-19-36, had pay at 3,875-3,972 feet, total depth. It was acidized with 4,000 gallons and in the first 24 hours flowed 912 bbls. through 1-inch tubing choke.

In the Eunice area, Continental Oil Co. No. 6-A-18 Meyer, C NW NE section 18-21-36, flowed 2,160 bbls. of oil naturally through three-fourths inch tubing choke in 24 hours and was completed. Pay was had at 3,850-3,950 feet, total depth. Texas Co. No. 2 State-Aggies, C SW SE section 31-20-37, topped pay at 3,735 feet; total depth 3,846 feet, completed. It flowed 744 bbls. of oil naturally through 1-inch tubing choke in 24 hours. Shell Petroleum Corp. No. 1 State "J," C SE SW section 32-20-37, was acidized with 2,000 gallons, 4,000 gallons, 1,000 gallons and then 4,000 gallons, after which it produced 58 bbls. in 24 hours through tubing choke, cutting 3 per cent basic sediment and water. Gas gauged 200,000 feet. Pay was had at 3,839-45 feet, total depth. Continental Oil Co. No. 12-B-4 Meyer, C SE SW section 4-21-36, had a natural flow of 96 bbls. through tubing choke in 24 hours and was completed at 3,860 feet, total depth. Top of pay was 3,860 feet. Gulf Oil Corp. No. 9 Bell-Ramsey, C SW SW section 4-21-36, had pay at 3,765-3,870 feet, was acidized and flowed 210 bbls. through tubing in 24 hours, cutting 16 per cent water. Same operators No. 4 Orcutt, C SE NE section 6-21-36, flowed 300 bbls. through tubing after acidizing, with gas gauging 700,000 feet. Top of pay was 3,805 feet; total depth 3,902 feet.

Gulf Oil Corp. No. 1 A. B. Reeves, C NW SW section 29-20-37, wildcat northeast of Eunice and southeast of Monument, was acidized and shot and in the first 24 hours flowed 80 bbls. on gas lift. It had pay at 3,832-46 feet; drilled to 3,859 feet, total depth, where water intruded, and plugged back to 3,846 feet to complete. Texas Co. No. 1 Eula Alexander, C NW SW section 7-21-37, wildcat east of Eunice, was acidized with 2,000 and 5,000 gallons and flowed 27 bbls. of fluid through tubing, cutting 20 per cent basic sediment and water. Gas gauged 600,000 feet. Packer was set at 3,100 feet.

In the Sims area, Samedan Oil Co. No. 1 Parks, SW cor. section 14-22-37, had pay at 3,495-3,610 feet; total depth 3,800 feet; plugged back to 3,610 feet and was shot. It flowed 102 bbls. of oil through tubing in the first 24 hours. Penrose & Rowan No. 2 Cary, C NE SW section 22-22-37, had pay at 3,524-77 feet, total depth, was shot and produced 68 bbls. on flow valves in 24 hours. Sun Oil Co. No. 1 Richards, C NE SE section 6-23-37, had oil pay at 3,698-3,798 feet, total depth, completed. In the first eight hours after a shot it pumped 8 bbls. of oil and 117 bbls. of water.

In the Hardy area, Gulf Oil Corp. No. 1 W. T. McCormack, C NE NE section 32-21-37, was acidized three times and flowed 174 bbls. of oil through tubing in 24 hours. Pay was topped at 3,695 feet; total depth 3,802 feet.

In the Jal sand area, Plains Production Co. No. 1 R. L. Mosley, C NW SE section 34-24-37, flowed 102 bbls. of oil through one-sixteenth inch tubing choke in 24 hours after a shot. It had pay at 3,430-3,530 feet; drilled 1 foot deeper, encountered sulfur water, and plugged back to 3,530 feet. Texas Co. No. 1 Lanehart, C NE section 29-25-37, flowed an estimated 384 bbls. of fluid in 24 hours, or at the rate of 16 bbls. per hour, cutting 35 per cent water. Pay was topped at 3,245 feet; total depth 3,308 feet.

Eunice Area

Gulf Oil Corp. No. 8 Bell-Ramsey-State, C NW NW sec. 4-21-36. T.D. 3,890 ft.; testing.

Empire G. & F. Co. No. 1 State "D," C SE NE sec. 32-21-36, ⅝ mi. N part of No. 157 lse. T.D. 3,941 ft.; rigging up standard tools.

General Crude Oil Co. No. 2 State "E," C NE SW sec. 32-21-36. T.D. 3,967 ft.; preparing to core.

Continental Oil Co. No. 11-B-4 Meyer, C SE SE sec. 4-21-36. Cellar and pits.

Samedan Oil Co. No. 1 Marshall, C SW NW sec. 12-21-36. T.D. 3,861 ft.; to pull tubing, clean out and shoot.

Continental Oil Co. No. 5-A-18 Lockhart, SE SE SW sec. 18-21-36. Drlg. 3,796 ft.

Devonian Oil Co. No. 5 State-Heasley, C NW SW sec. 5-21-36. Cellar and pits.

Devonian Oil Co. No. 6 State-Heasley, C NE SW sec. 5-21-36. Loc.

Humble O. & R. Co. No. 2 Knox, C SW SE sec. 10-21-36. Drlg. 3,852 ft.; testing.

Gulf Oil Corp. No. 2 Collins, C NE NW sec. 14-21-36. Drlg. 1,420 ft.

Humble O. & R. Co. No. 2 State-Aggies, C SW SW sec. 31-20-37. Cellar.

Gulf Oil Corp. No. 10 Bell-Ramsey-State, C NW SW sec. 4-21-36. Drlg. 2,006 ft.

Atlantic Oil Prod. Co. No. 2 State "K," C NE SW sec. 6-21-36. Drlg. 3,820 ft.

Gulf Oil Corp. No. 3 Houston, C SW SE sec. 7-21-36. Rigging up rotary.

Gulf Oil Corp. No. 1 H. L. Houston, C SE SW sec. 7-21-36. Rigging up rotary.

Humble O. & R. Co. No. 6 Adkins, C NW NW sec. 10-21-36. Drlg. 1,348 ft.

Atlantic Oil Prod. Co. No. 1 State "L," C SW NW sec. 11-21-36. Drlg. 3,320 ft.

Mid-Continent Pet. Corp. No. 1 Marshall, SW SE SE sec. 11-21-36. Drlg. 3,133 ft.

Gulf Oil Corp. No. 3 Collins, C SW NE sec. 14-21-36. Rig.

Gulf Oil Corp. No. 3 Bell-State "C," C NE NW sec. 15-21-36. Rig.

Gulf Oil Corp. No. 2 Janda "C," C SW SW sec. 15-21-36. Drlg. 3,048 ft.

Gulf Oil Corp. No. 8 Arnott-Ramsey "C," C SW SE sec. 21-21-36. Drlg. 1,213 ft.

Skelly Oil Co. and Humble O. & R. Co. No. 1 Adkins, C NE NW sec. 10-21-36. Rig.

Continental Oil Co. No. 2-B-14 Lockhart, C NW NW sec. 14-21-36. Rigged up rotary.

Continental Oil Co. No. 1-D-15 State, C SE NE sec. 15-21-36. Drlg. 3,135 ft.

Gulf Oil Corp. No. 5 Orcutt, C NW NW sec. 5-21-36. Cellar and pits.

Shell Pet. Corp. No. 2 State "E," C NW NE sec. 6-21-36. Cellar and pits.

Atlantic Oil Prod. Co. and Tide Water Oil Co. No. 1 H. L. Houston, NE NW NW sec. 7-21-36. Cellar and pits.

Gulf Oil Corp. No. 9 Arnott-Ramsey "C," C NE NE sec. 21-21-36. Cellar; pits.

Atlantic Oil Prod. Co. No. 2 State "L," C SE NW sec. 22-21-36. Cellar and pits.

Landreth Prod. Co. No. 1 State "D," C NW NW sec. 22-21-36. Cellar and pits.

Continental Oil Co. No. 2-D-15 State, C NW NE sec. 15-21-36. Waiting on derrick.

Lea County—Miscellaneous

Landreth Prod. Co. No. 1 J. W. Grizzell, C SE SW sec. 5-22-37. Drlg. 3,620 ft.; est. 4,000,000 ft. gas.

Rowan et al No. 1 Mattern, C SW SE sec. 7-22-37. T.D. 3,727 ft.; testing.

C. & G. Oil Co. No. 1 E. Weir, C NE NE sec. 14-20-37. Wildcat; T.D. 4,045 ft.; est. 4,000,000 ft. gas; spraying oil.

Continental Oil Co. No. 1 J. C. Farney, C SW SE sec. 5-33-36. Wildcat. Loc.

Gulf Oil Corp. No. 1 S. J. Carr, C NW SW sec. 3-24-37. Drlg. 3,275 ft.

Gulf Oil Corp. No. 2 N. F. Humphreys, C NE NW sec. 25-25-36. T.D. 3,350 ft.; flowed 33 bbls. water and oil in 2 hrs.; bldg. storage.

Continental Oil Co. No. 2-A-19 Eaves, C SW SW sec. 19-26-37. Drlg. 3,200 ft.

Gulf Oil Corp. No. 1 J. A. Stuart, C SW NE sec. 10-25-37. T.D. 3,431 ft.; flowed 126 bbls. in 24 hrs.; bldg. storage.

Gulf Oil Corp. No. 1 L. M. Buffington, C NW SW sec. 13-25-37. T.D. 3,063 ft.; est. 15,000,000 ft. gas; prep. to kill gas.

Sun Oil Co. No. 1 Lanehart, C SE SE sec. 20-25-37. T.D. 2,757 ft.; 22,100,000 ft. gas; killed gas; set tbg.; stuck; fsg.

Magnolia Pet. Co. No. 1 E. O. Carson, C NW SW sec. 28-21-37. Drlg. 3,570 ft.

Skelly Oil Co. No. 1 Stuart, C NE NW sec. 15-25-37. T.D. 3,150 ft.; set 7-in. csg.

Byrd-Frost, Inc. No. 1-A-1 Wells, C NW SW sec. 1-25-36. T.D. 3,462 ft.; to test.

Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. T.D. 445 ft.; drlg. by tools.

Texas Co. No. 1 E. Fanning, C SE NE sec. 4-24-37. Drlg. 1,845 ft.

Jal Natural Gas Co. No. 1 Bates, C NW SW sec. 20-25-37. Drlg. 607 ft.

Harry Leonard No. 2 Lanehart, C SE NW sec. 21-25-37. Drlg. 1,250 ft.

Culberson & Irwin No. 1 Eaves, C SW NW sec. 18-21-33. Drlg. 1,350 ft.

Humble O. & R. Co. No. 1 B. E. Boyd, C NW SE sec. 35-22-37. Drlg. 470 ft.

Argo Royalty Co. No. 1 Lanehart, SW SE NE sec. 21-25-37. Cellar and pits.

Magnolia Pet. Co. No. 1 Scharbauer-Edison, C NW NE sec. 29-16-35. Loc.

Plains Prod. Co. No. 1 Knight, C NE SE sec. 21-24-37. Spudded.

Plains Prod. Co. and Culberson & Irwin No. 2 Knight, C NE SW sec. 14-24-32. Cellar and pits.

Plains Prod. Co. and Culberson & Irwin No. 1 Williams, C SW NE sec. 34-24-37. Standardizing.

Hobbs Area

National Securities Oil Corp. No. 1 Linam, NE SE SW sec. 33-18-37; wildcat. Old well P.B. from 4,238 to 4,228 ft.; swbd. sulfur wtr.; no oil; S.D. for orders.

Cooper Area

Southern Oil Corp. No. 1 Vaughan, C SW SE sec. 15-24-36. T.D. 3,592 ft.; swbg. and testing.

Southern Oil Corp. No. 1 Gates, C SW NW sec. 23-24-36. T.D. 3,497 ft.; flowed 82 bbls. oil in 24 hrs., 200 bbls. water per hour; P.B. to 3,445 ft.; drlg. plug.

Skelly Oil Co. No. 5 Coates, C NE SE sec. 3-24-36. Drlg. 3,525 ft.

Monument Area

Anderson-Prichard Oil Corp. No. 3 Britt, SE SW NE sec. 7-20-37. Drlg. 3,772 ft.

Continental Oil Co. No. 4 State "C," C SW NW sec. 30-19-37. T.D. 3,895 ft.; set 5½-in. csg.

Amerada Pet. Corp. No. 3 Phillips, C SW NE sec. 1-20-36. Drlg. 3,509 ft.

Amerada Pet. Corp. No. 3 State "D," C SE NW sec. 1-20-36. T.D. 3,910 ft.; testing.

Anderson-Prichard Oil Corp. No. 2 Britt "A," C NE SW sec. 6-20-37. Cellar.

Skelly Oil Co. No. 1 State "E," C SE NE sec. 29-19-37. Drlg. 3,710 ft.

Continental Oil Co. No. 2-A-3 Reed, C SE NE sec. 3-20-36. T.D. 3,930 ft.; flowed 55 bbls. per hour; setting packer.

Amerada Pet. Corp. No. 2 State "K," C NE NW sec. 29-19-37. Drlg. 3,960 ft.

Amerada Pet. Corp. No. 1 Sarah Phillips, SE SE SW sec. 33-19-37. T.D. 3,760 ft.; set 6⅝-in. csg.

Gulf Oil Corp. No. 2 Mathews, C NW SE sec. 6-20-37. T.D. 3,885 ft.; resetting packer.

Anderson-Prichard Oil Corp. No. 4 Britt, C NW NE sec. 7-20-37. T.D. 3,399 ft.; csg. parted; waiting on cement.

Amerada Pet. Corp. No. 5 Weir, C SW NW sec. 35-19-36. T.D. 3,826 ft.; set 6⅝-in. csg.

Amerada Pet. Corp. No. 2 Lambert, C SW NE sec. 6-20-37. Drlg. 3,525 ft.

Gulf Oil Corp. No. 1 Ketter, C SW SE sec. 20-19-37. Rig.

Tide Water Oil Co. No. 2 State "F," C NE NW sec. 20-19-37. Drlg. 3,408 ft.

Amerada Pet. Corp. No. 2 State "P," C SW SW sec. 29-19-37. Drlg. 3,644 ft.

Empire O. & R. Co. No. 4 State "E," SW cor. sec. 30-19-37. Drlg. 3,435 ft.

Gulf Oil Corp. No. 1 Culp "B," NW NW SE sec. 31-19-37. Rig.

Gulf Oil Corp. No. 1 Phillips, NW NW NE sec. 31-19-37. Drlg. 3,307 ft.

Tide Water Oil Co. No. 1 State "H," C NW SW sec. 32-19-37. Drlg. 3,517 ft.

Shell Pet. Corp. No. 1 Cooper, NW NW NE sec. 5-20-37. Drlg. 3,712 ft.

Texas Co. No. 3 State-Aggies, NE cor. sec. 20-20-37. Drlg. 2,460 ft.

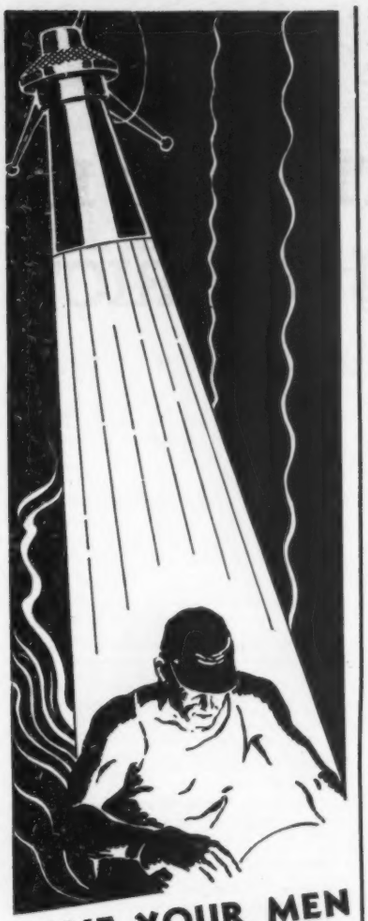
Gulf Oil Corp. No. 5 Graham-State "C," C NW NE sec. 25-19-36. Rig.

Amerada Pet. Corp. No. 2 State "S," C SW SW sec. 2-20-36. T.D. 2,435 ft.; set 8⅝-in. csg.

Continental Oil Co. No. 1-A-17 State, C SW SW sec. 17-19-37. Drlg. 2,660 ft.

Shell Pet. Corp. No. 1 State "F," C NE SE sec. 29-19-37. Drlg. at 3,644 ft.

Amerada Pet. Corp. No. 1 Phillips "A," SW SW NE sec. 31-19-37. Rig.



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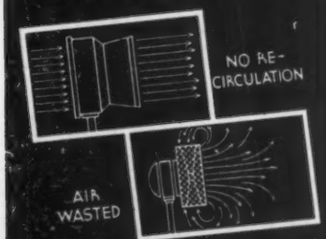

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Amerada Pet. Corp. No. 1 State "U," C SW NW sec. 32-19-37. Cellar.
Amerada Pet. Corp. No. 1 Gaither, C NE SE sec. 34-19-36. Drlg. 3,020 ft.
Sun Oil Co. No. 2 State, C SE NE sec. 25-19-36. Cellar and pits.
Ohio Oil Co. No. 1 Barber, C SW SW sec. 32-19-37. Cellar.
Shell Pet. Corp. No. 1 State "G," SW cor. sec. 16-20-37. Cellar and pits.
Skelly Oil Co. No. 1 State "F," SE cor. sec. 17-20-37. Cellar and pits.
Shell Pet. Corp. No. 3 State "B," C NE NW sec. 36-19-36. Rig.
Texas Co. No. 1 J. W. Cooper, C NW NE sec. 5-20-37. Cellar and pits.
Amerada Petroleum Corp. No. 2 State "T," C NE SW sec. 25-19-36. Loc.
Texas Co. No. 1 Weir, C SW NW sec. 25-19-36. Cellar and pits.
Amerada Petroleum Corp. No. 1 State "V," NE cor. sec. 36-19-36. Cellar, pits.
Continental Oil Co. No. 3-A-3 Reed, C NE SE sec. 3-20-36. Loc.

Sims Area

Skelly Oil Co. No. 1 Ella Simms, C NW SE sec. 3-23-27. T.D. 3,375 ft.; rigging up standard tools.
Humble O. & R. Co. No. 1 W. B. Farrell, C SW SE sec. 22-22-37. T.D. 3,705 ft.; plugged back to 3,684 ft.; cleaning out.
Tide Water Oil Co. No. 1 A. Waldon, C SE NE sec. 21-22-37. T.D. 3,620 ft.; flowed 150 bbls. in 12 hrs. after shot.
Magnolia Pet. Co. No. 1 Cary, C NE SE sec. 21-22-37. T.D. 3,550 ft.; swabbed 40 bbls. in 24 hrs.; cleaning out.
Penrose & Rowan No. 3 Cary, C SE NW sec. 22-22-37. T.D. 1,305 ft.; waiting on tools.
Continental Oil Co. No. 1-A-15 Elliott, SE SE SE sec. 15-22-37. Location.
Continental Oil Co. No. 1-A-21 Elliott, C SE SE sec. 21-22-37. Location.
Skelly Oil Co. No. 2 J. V. Baker, C NW NW sec. 27-22-37. Drlg. 3,265 ft.
Gulf Oil Corp. No. 1 F. C. King, C SW NW sec. 5-23-37. Drlg. 3,305 ft.
Penrose & Rowan No. 4 Cary, C SW NW sec. 22-22-37. T.D. 1,150 ft.; standard-izing.
Samedan Oil Co. No. 1 Hughes, C NE SW sec. 4-23-37. Loc.

Eddy County

Etz Bros. No. 2 State, C NW SW NE sec. 16-17-30. Drlg. 3,195 ft.
Tignor, Etz & Keys No. 4 Keys "A," C SW SE sec. 10-17-28. Drlg. 1,010 ft.
Grayburg Oil Co. No. 7 Burch, C NW NE sec. 19-17-30. Drlg. 975 ft.
Red Lakes Oil Co. No. 7 State, NW NW SE sec. 22-17-28. Drlg. 1,788 ft.
Carper et al No. 1 Gissler "B," NW NE NW sec. 23-17-30. Drlg. 443 ft.
Hammond et al No. 1 State, SW SE SW sec. 15-17-28. Rigging up machine.
Pecos Valley Gas Co. No. 1 Andrews-State, C SW SW sec. 2-17-28. Drlg. at 450 ft.

Harding County

Kahay No. 1 Dae Daca, C sec. 19-20n-31e. T.D. 1,511 ft.; setting 5 3/16-in. csg.
Clyde B. Neill No. 1 Foster, C NW SW sec. 27-21-30. Drlg. 700 ft.

De Baca County

Mid-Continent Engineering Corp. No. 1 State, C NW SE sec. 27-4n-22e. T.D. 1,051 ft. in broken lime; S.D.

Chaves County

Comanche Drlg. Co. No. 2 Sloop & Purcell, C NE NE sec. 15-11-26. Drlg. 1,105 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norine Realty Co., Inc., No. 2 Gallegas grant, SE NW NW sec. 19-11n-4e. Drlg. 1,700 ft.

Guadalupe County

Anton Chico Dev. Co. No. 2 fee, NW NE SW sec. 20-9n-17e. T.D. 804 ft.; fsg. tools.
Ralph Knight et al No. 1 Anton Chico, SW sec. 33-9n-16e. Spd. and S.D.

McKinley County

Al Gibbons No. 1 fee, SW SW SW sec. 22-20n-9w. Drlg. 390 ft. sh.; 8¾-in. and 6¼-in. set.
S. Dysart et al No. 1 Bouton, CEL NW NE sec. 14-14n-10w. T.D. 1,490 ft.; rmg. at 900 ft.
Foster & Clark No. 1 R. R. land, NE NE NW sec. 29-20n-9w. Lost hole at 75 ft.; skdg. rig.

Rio Arriba County

Larrazola & Turner No. 1 Gonzales, SE SW SE sec. 24-32n-1e. (Formerly carried in Colorado.)

San Juan County

Continental Oil Co. No. 54 Tribal, CNL NW NE section 2-29n-19w, Rattlesnake field, was completed at 784 feet in sand at 770-784 feet for 50 bbls. of oil and 19 bbls. of water.

Atchison & Galloway No. 1 Patd., C SE SE sec. 19-29n-11w. Drlg. 120 ft.; small show sulfur wtr. at 87 ft.
W. L. Hair No. 1 Hair, NE NW NE sec. 23-29n-11w. S.D. 900 ft.
Kuts Canon O. & G. Co. No. 1 Day, SW SW SW sec. 20-28-10w. T.D. 4,400 ft.; pulled 4½-in.; C.O. 3,900 ft.
Nick Spatter No. 1 fee, C NE SW sec. 32-21-11w. S.D. 1,780 ft.; T.A.
Southern Union Gas Co. No. 6 Government, C NW NW sec. 19-28-10w. Completed at 2,065 ft. as gas well; not tested.

Torrance County

45 Pet. Co. No. 1 Greenfield, C NW SW sec. 17-9-8e. Drlg. 2,000 ft. in green L.

COLORADO

Adams County

Oklahoma Oil Co. No. 1 Baxter, C SW sec. 2-3s-66. Drlg. 1,100 ft.
Glenridge Oil Corp. No. 1 Hills, SE SE SE sec. 27-3s-64. Cmtd. caves to botton at 4,262 ft.; W.O. 6¼ in.

Archuleta County

William E. Hughes estate No. 8 Gramps, sec. 24-33n-2e (unsurveyed). Drlg. unreported depth.
William E. Hughes estate No. 9 Gramps, sec. 24-33n-2e (unsurveyed). Drlg. unreported depth.
Carl D. Linstrom No. 1 Crowley, SE SE SE sec. 3-22n-2e. R.U.
Oil City Pet. Co. No. 1-A Garnett, NW NE NW sec. 25-33n-2e. S.D. 1,515 ft.; top Dakota series 1,415 ft.
Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Reeder, Lot 5 (SW SE SW), sec. 24-33n-2e. Drlg. 880 ft.; first sh. oil at 612 ft.; thin streak of sand at 779 ft.; est. at 12 bbls.
H. L. Kendrick No. 1 Crowley (unsurveyed), sec. 3-32-1. Drlg. 1,132 ft.

Baca County

Paul R. Robb Pet. Corp. No. 1 Lovett, NW NW NW sec. 24-32s-48w. Drlg. 1,729 ft.

Boulder County

Boulder Prod. & Dev. Co. No. 2 Maxwell, SW SW NE sec. 24-1n-71. Ready to spd.

Costilla County

L. R. Lane No. 2, sec. 25-31s-74. Drlg. below 500 ft.

Jackson County

Colorado Oil Ref. Co. No. 1 North Park Coal Co., NW NW sec. 18-9n-78w. Drlg. and U.R. at 2,375 ft.

Jefferson County

Ruby Hill O. & G. Co. No. 1 Braden, SE SE SE sec. 24-4s-6w. S.D. 4,475 ft.; to finance.

Larimer County

Continental Oil Co. No. 8 Buckeye-U. P., C NE SW sec. 31-10n-68. Drlg. 2,601 ft. in sh. and shells.

La Plata County

McGarr Pet. Co. No. 1 Pinton Mesa, CSL NE NE sec. 34-35n-12w. S.D. 3,500 ft. for 6¼-in.

Las Animas County

Mountain States Oil Corp. No. 1 Nikola, C NE SE sec. 10-34n-62w. S.D. 1,813 ft.

Lincoln County

Consolidated Smelting & Metals Co. No. 1 Hancock, NE NE SW sec. 7-17s-62. T.D. 2,050 ft.; fsg. bailer.

Moffat County

Mountain Fuel Supply Co. No. 1 Allen, NE SW SE sec. 32-12n-97w. M.I.M. and drlg. water well.
Mountain Fuel Supply Co. No. 1 Kuykendall, NE NE SE sec. 22-12n-100. Drlg. 2,434 ft.
Texas Co. No. 3 Iles Inv. Co., 200 ft. E of W line, and 165 ft. S of N line, Lot 4, sec. 23-4s-92. Drlg. 3,138 ft. in Morrison sh.; top Frontier 2,555 ft.; elev. 6,429 ft.

Morgan County

Swisher et al No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, sec. 3-4n-60. T.D. 1,449 ft.; R.U.R.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NE sec. 21-26n-17w. Contractor with Perry Coon to comp.; drld. by tools; making new hole below 3,705 ft.

Park County

The South Park Oil Co. No. 1 State, section 16-11s-75, Three-Mile dome on the Hartsel anticline, which flowed over the top at 4,157 feet last April and indicated the opening of a new pool, is steadily drilling deeper and has cased off the upper oil which is estimated at an aggregate of 200 bbls. a day from several horizons. It is bottomed at 4,586 feet and underreaming the 6¼-inch at 4,556 feet to shut off a flow of gas encountered at 4,558 feet. The gas gauged 2,880,000 feet with a rock pressure of 531 pounds.

Same company is digging cellar for its test on the South dome, 3 miles south of the discovery well. This will be much shallower drilling as it starts 1,900 feet below the top of the Pierre and expects the first objective, the Apache Creek sand, at 2,177 feet as against 4,157 feet in the well to the north.

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75. Digging cellar.
South Park Oil Co. No. 1 LeBert, NE NE NW sec. 21-11s-75w. Comp. W.W.; drlg. at 130 ft.
South Park Oil Co. No. 1 State, SE NE SW sec. 16-11s-75w. T.D. 4,586 ft.; U.R. 6¼-in. at 4,558 ft.; to S.O. gas.

Routt County

Mid-Colo. Pet. Co. No. 1 Omoholt, NE SE SE sec. 29-4n-87w. S.D. 2,910 ft.; renewing leases before drlg. into Sundance.

Washington County

I.T.I.O.-Carter-Foster Minerals Corp. No. 1 Vorce, C NE NE sec. 28-1s-49. Drlg. 2,700 ft.

Weld County

Continental Oil Co. No. 2 Briggs, C NE SW sec. 13-6n-61. M.I. Rot.

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Continental Oil Co. No. 1 State Bank of Trenton, C SW NE sec. 21-8n-59w. Drlg. 6,088 ft. in sh.

Yuma County

Following the rumor two weeks ago that the Indian Territory Illuminating Oil Co. No. 1 Strangway, on the Beecher Island block, had cored saturated oil sands in the Dakota and Morrison, which is neither confirmed nor denied officially, the company is reported to have taken leases on between 7,000 and 8,000 acres at the southern end of the block and to have taken up another block of around 15,000 acres about 15 miles west of the Beecher Island test. The Beecher Island test, estimated drilling at 5,000 feet, is reported having trouble with gas and to have slowed up drilling.

Indian Territory Ill. Oil Co. No. 1 Strangways, C NW SW sec. 21-2s-43w. Operator not reporting depth; reported drlg. below 5,000 ft.

WYOMING

Albany County

Geo. D. Parkinson et al No. 1 George & Hunt, NW NE SE sec. 5-17-75w. Drlg. 1,015 ft.; wtr. in Shannon sd.; S.O. with 12½-in. cmtd. at 815 ft.
California Co. No. 2 Wilson, SW SW SW sec. 18-17n-76. Cmtd. serf. pipe at 132 ft.; W.O.C.

Big Horn County

J. W. Bales No. 1 Parker, C SW SW sec. 23-4-89. S.D. 690 ft. for pipe.
Joan Oil Co. No. 1 Howell, Lot 63 (NW SE NE) sec. 32-55n-97. Resuming at 1,190 ft.
Jerome Drumheller No. 2 Govt., NW NE SE sec. 17-49n-91. Drlg. 281 ft.
Montana-Wyoming Oil Co. No. 1-X Allen, Lot 52, sec. 18-56n-97w. Drlg. 2,199 ft. (relief well for No. 1 Allen).
Ohio Oil Co. No. 2 State, NE cor. Lot 38, sec. 36-56n-97. R.U.
Ohio Oil Co. No. 1 Orson Vail, SW NW NE sec. 23-56n-97w. Drlg. 2,936 ft.
Ohio Oil Co. No. 1 Robert Till, C SE SW sec. 24-56n-87w. Cg. 5,097 ft.; started cg. at 5,064 ft.
Peay Oil Co. No. 1 Denio, Tr. 43-C, sec. 15-55n-87w. T.D. 3,890 ft.; trying to cmt. off wtr. through hole in pipe.
Peter Evanoff et al No. 1 McAllister, NW NE SE sec. 3-55n-97. T.D. 2,467 ft.; lowering pipe to S.O. caves.
Stock Oil Co. No. 1 Yates, CSL SW NE sec. 33-56n-87w. Drlg. 3,188 ft.; top Embar 3,082 ft.
Taylor Oil Co. No. 1 Robinson, SW SW NW sec. 24-56n-97w. Stdg. rigged (cor.).

Carbon County

Ohio Oil Co. No. 1 Baker, NW NW SW sec. 2-23n-79. T.D. 1,498 ft.; C.O.
General Pet. Corp. No. 1 Union Pacific, SW NW sec. 5-19n-83w. Crg. 2,920 ft. in basal G.P. sd.
Ohio Oil Co. and California Co. No. 2 Union Pacific, C NE NE sec. 35-21n-79w. Drlg. 5,409 ft. in Morrison.
Ohio Oil Co. No. 7 Diamond Cattle, SW SW NW sec. 35-20n-78w. Drlg. 2,200 ft.
Ohio Oil Co. and Californnia Co. No. 3 Union Pacific, C NE SE sesc. 23-21n-79w. Drlg. 4,993 ft.
Ohio Oil Co. No. 2 Dixon, SE NE SE sec. 34-20n-78w. R.U. to deepen old well from 3,094 ft. to Sundance.
Sinclair-Wyoming Oil Co. No. 10 Govt., SW SE NW sec. 7-26n-89w. Rigged and ready to spd.
Union Oil Co. of California and Mutual Oil Synd. No. 1 Union Pacific, 1,890 ft. from E line and 1,320 ft. from S line, sec. 1-18-78w. Crg. 4,955 ft. in Lakota; Muddy at 4,788-4,828 ft.; Dakota 4,903-47 ft.; top Lakota 4,952 ft.

Converse County

Chadron-Osage Oil Co. No. 1 State, SW SW sec. 16-32n-69w. Drlg. 2,669 ft.
J. A. Olson No. 1 Reese, C NE SE sec. 10-32n-65w. M.I.M.

Fremont County

Tropic Oil Co. No. 1 Govt., C SE SW sec. 34-27n-90w. T.D. 2,550 ft.; rng. 4¾-in.
Sinclair-Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. Crg. 4,192 ft.; not yet in Frontier.

Hot Springs County

California Exploration Co. No. 2 Govt., NW SW NW sec. 4-44-96. T.D. 4,246 ft.; P.B. to 4,165 ft.; shot second time with 80 qts.; C.O.
Ohio Oil Co. No. 73 Mill Iron Cattle Co., NE SW SE sec. 19-4n-98w. T.D. 3,860 ft.; prep. to cmt. 7-in. at 3,840 ft. in top Embar; first sat. at 3,854 ft.; will D.D.

Lincoln County

Senrab Oil Corp. No. 3 Govt., CSL SE NW sec. 10-26n-113w. S.D. 1,020 ft.
Texas Co. No. 2-D Govt., N SW NW sec. 10-26-113. Drlg. 765 ft.; est. 2,000,000 ft. of gas.

Niobrara County

The Lance Creek field, which has been prolific with surprises, had another this week when Continental Oil Co. No. 2 Apex-3, drilling for the account of the Buck Creek Oil Co., of which Continental owns 80 per cent of the stock, showed for an oil producer. It was a semiwildcat 1½ miles to the east of the Ohio Oil Co. No. 3 Rohlff, C SE NE section 32, the most northerly producer in the field and the nearest well to No. 2 Apex-3. It will prove up 700 to 800 acres in the Sundance, practically all of which is controlled by the Continental Oil Co. and the Argo Oil Co. The Argo company agreed to contribute dry-hole money in the drilling of the test. Its total depth is 4,026 feet. It drilled dry sand in the Morrison at 3,710-40 feet. The 8¼-inch was cemented at 4,012 feet, probably the top of the basal Sundance, and cores showed saturation to bottom. In a drill-stem test for 30 minutes it made 25 bbls. with an estimate of 1,500,000 feet of gas in 14 hours. This well indicates that at least 2,500 acres in Lance Creek will be productive in the Sundance with the limits of the pool not yet determined in that horizon. Five miles to the east and north of the Continental well, the Western States Oil & Land Co. drilled a test in the SW NE section 28-36-64 to the Dakota 17 years ago and it is still producing 25 to 30 bbls. daily with a little water. This was believed to have been on a nose of the Lance Creek dome as no other producer was completed near it. The discovery in the Continental well will attract attention to the northeast as no Sundance test has been drilled in that direction and its possibilities are still unknown.

The Ohio Oil Co. No. 5 Converse Sheep, which made a discovery in the Tensleep at below 4,600 feet, continues to be a mystery well. It is reported trying to fish out broken tubing. One report is that the well will be put on production. If that is true, it will mean that offset drilling to that horizon will be required and the other operators do not appear anxious to undertake such a campaign until the question of a market for Lance Creek crude is settled. Another unverified rumor is that No. 5 Converse Sheep will be deepened as a test to the Madison. A sample of oil from the Tensleep in this well tested 40 gravity and had only a smell of sulfur. It is black oil, but the residuum asphalt is said to be small.

The Ohio Oil Co. No. 8 Lamb-2, in proven territory, is a near completion at 4,047 feet, total depth. It topped the red beds at 4,045 feet. It had 98 feet of saturated basal Sundance and promises to make a good well. It cemented the 7-inch at 3,947 feet with 400 sacks and is drilling plug.

Continental Oil Co. No. 1-B Schuricht, C NW SE sec. 6-35n-6w. Drlg. 3,891 ft. in gr. sd.; O. & G. sat. at 3,871-91 ft.
Continental Oil Co. No. 2 Apex-3, C SE NW sec. 34-36n-65w. T.D. 4,026 ft.; W.O.C. 8¼-in. at 4,012 ft.
Continental Oil Co. No. 3 Schuricht, C SW NW sec. 5-35-65w. Drlg. 2,308 ft. in sh.
Lewis Gokel No. 1, NE SE NW sec. 31-35n-62w. Drlg. 1,650 ft.
MacKinnie Oil & Drlg. Co. No. 1 Thompson, NE NW NE sec. 7-35n-65w. Drlg. 2,317 ft.
Ohio Oil Co. No. 8 Lamb, C SW NE sec. 5-35n-65w. T.D. 4,047 ft.; cmtd. 7-in. at 3,947 ft.; drlg. plug.
Ohio Oil Co. No. 5 Converse Sheep, C SE SW sec. 32-36n-65w. S.D. below 4,600 ft.; believed to have cored top of Tensleep.
Ohio Oil Co. No. 5 Putnam, C NW SW sec. 33-36-65w. Rig.
Chester Oil Co. No. 1 fee, NE NE NE sec. 14-39n-61. Drlg. 183 ft.; (formerly Wickersham & Kyle).
S. & H. Dev. Co. No. 1-A Olinger, SW NE sec. 1-36n-63. T.D. 1,750 ft.; fsg.

Park County

Resolute Oil Co. No. 1 State, C NW SW sec. 16-57-101w. M.I.M. and R.U. to resume at 3,060 ft.

Sheridan County

Beaver Creek Oil Co. No. 1 Allison, SW SE sec. 15-55n-85w. Drlg. 3,090 ft.

Sublet County

Wright & Lackey No. 1 Haddenham, SE NW SW sec. 21-28n-113w. (Dry Piney); R.U. Fort Worth spudder.

Sweetwater County

Mountain Fuel Supply Co. No. 1 Nightingale, C SW NE sec. 32-16n-104w. T.D. 1,326 ft.; 10-in. at 1,232 ft.; cmtd. off lost tools.

Uinta County

Badger Basin Oil Co. No. 1-B, NW NW SW sec. 10-14n-118. Drlg. 1,060 ft.

Washakie County

Arlton & Doyle No. 1 Govt., SW SW SE sec. 29-48n-91. Resumed at 900 ft. (cor.); drlg. 984 ft.
Wyoming O. & R. Co. No. 2 Govt., NW SW SW sec. 31-48n-90w. T.D. 1,104 ft.; fsg. tools.
Wyoming O. & R. Co. No. 1 Frison, NW SW NW sec. 14-48n-91. T.D. 2,295 ft.; wtr. 2,195-2,295 ft.; S.O. in sd. at 2,231 ft.; recmtg. 6¼-in. at 2,228 ft.
Bruce C. Teeters No. 2 Govt., SW SW SW sec. 30-48n-90. Drlg. 500 ft. (first report).

Weston County

The Conway Oil Corp.'s wildcat at Dewey is making slow progress on account of reduced size of hole, the 3½-inch being at 2,304 feet. It is drilling in hard tight sand at 2,338 feet and continues to show saturation. This is a tendency in which there was a showing for 15 bbls. a day at 2,306 feet.

In the Osage field, Charles Stough No. 1, SW SW NW section 32-47-63, was completed for 3 bbls. on the pump in sand at 265-304 feet. Wheedon Oil Co. No. 12, SW cor. section 16-46-63, was deepened to 404 feet and recompleted for 3 bbls. in broken sand at 362-404 feet.

Conway Oil Corp. No. 1 Govt., C SE NW sec. 7-41n-60w. Drlg. 2,338 ft.
Beaver Creek Oil Synd. No. 1 State, C NE NE sec. 23-44n-63w. R.U. and ready to spud; W.O. water.
Harkins et al No. 2, NE SW NW sec. 31-46n-63w. R.U.

MONTANA

Carbon County

Bailey-Round Butte Oil Co. No. 1, NW NE SE sec. 3-6s-23. T.D. 1,551 ft.; redrlg. 1,483 ft.

Fallon County

The Montana-Dakota Utilities Co. No. 1 Unit 8, NE NE NW section 17-4n-62, Little Beaver dome on the

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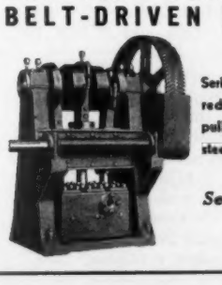

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Baker-Glendive anticline near the eastern Montana boundary, which came in two months ago as a discovery, but which proved somewhat of a disappointment when it showed water with the oil, is reported to have plugged off the bottom water after cementing three times and to have swabbed 20 bbls. of oil an hour with no water. Total depth was 6,797 feet. It was plugged back to 6,759 feet and top of the pay was at 6,747 feet. It is shut down waiting for wall scraper.

Montana-Dakota Utilities Co. No. 75, C SW sec. 25-9n-58. Drlg. 1,400 ft. (first report).
Montana-Dakota Utilities Co. No. 2 Unit 8, C NE SW sec. 8-4n-62. R.U.; W.O. tools.

Daniels County

Whitetail O. & G. Co. No. 1, NW NE NW sec. 10-36n-50e. O.W.D.D.; drlg. 1,865 ft.

Fergus County

Minnesota Co. No. 1 Fenholt, SE NW SW sec. 24-21n-18e. S.D. 1,100 ft.; tools still in hole.
Judith Operating Co. No. 2 Govt., NW NE sec. 35-22n-17e. Drlg. 1,475 ft.; gas and water in sd. at 1,002-1,150 ft.
Kalispel-Kevin Oil Co. No. 2 Emmons, C SW SE sec. 20-21-18e. Drlg. 576 ft.

Glacier County

Four completions and three new operations were reported in the Cut Bank field. The most important of the completions was Cobb & Pardee's No. 1 Stufft, C SE NW section 25-36-6w, 1¾ miles north of the nearest producer in the oil area and approximately 2½ miles southwest and northwest of two dry holes on the west side of the gas area. It was a failure in the Cut Bank sand, but plugged back to the Moulton sand at 2,933-60 feet and was completed as a gas well. On the final gauge it made 9,073,252 feet. Total depth was 3,100 feet. The Cut Bank sand was at 3,006-50 feet. It showed 50 feet of water on a 12-hour test at 3,045-50 feet. The top of the Ellis was at 3,100 feet and the elevation is 4,127 feet. Before drilling deeper the Moulton sand gauged 13,500,000 feet of gas.

Manning & Marshall No. 2 Tribal-120, Lot 8, (NW NE) section 7-32-5w, in the southern part of the field, swabbed 15 bbls. first eight hours from the Cut Bank at 2,938-70 feet. Oil rose 600 feet in the hole. Total depth is 2,971 feet and the Sunburst at 2,877-87 feet was dry. Elevation is 3,730 feet.

The Montana Power Gas Co. No. 1 Langabeer Unit, SE SE NE section 17-35-5w, on the west side of the gas area, gauged 19,000,000 feet of gas from the Cut Bank sand at 2,855-2,900 feet. First gas was at 2,858 feet. Elevation is 4,142 feet.

Kately No. 4 Drumheller-Ward, SE NE NE section 10-34-6w, swabbed 120 bbls. first 24 hours from the pay at 2,895-2,912 feet, and after a shot with 80 quarts swabbed 95 bbls. in 24 hours. Total depth is 2,914 feet and the elevation 3,768 feet.

Cobb-Pardee No. 2 Morrison, CEL NE SE sec. 24-33n-6w. Rig.
Cobb-Pardee No. 1 All.-115, C SE SE sec. 31-33n-5w. Drlg. 310 ft.
Consolidated Gas Co. No. 2 All.-114, C SE SW sec. 31-33n-5w. R.U.
A. E. Crumley No. 2 Allotted-113, SW NW SE sec. 31-33n-5w. Drlg. 2,710 ft.
Dakota-Montana Oil Co. No. 2 Mattson, N NE NW sec. 14-34n-6w. Drlg. 530 ft.
Hannah-Porter Co. No. 1 Allotted-130, C Lot 3, sec. 6-32n-5. Drlg. 2,870 ft.; 1,000 ft. of oil.
B. V. Hole No. 1 Tribal, C NW SW sec. 36-33n-6w. M. on loc.
B. V. Hole No. 1 Allotted-124, 640 ft. out of NE cor. sec. 1-32-6w. Cmtd. 10-in. 665 ft.; Colo. 648 ft.
Annand Hutchings No. 2 Federal Land Bank, S SE SW sec. 11-34n-6w. Drlg. 320 ft. (first report).
Kincheloe-Hanlon No. 2 State, NE NE NE sec. 36-33n-6w. T.D. 2,675 ft.; fsg. tools.
R. E. Lee No. 1 All.-137, SE SW NE sec. 26-33n-6w. R.U.
Montana Headlight Oil Co. No. 6 Yunck, C SW NW sec. 1-34n-6w. Drlg. 1,750 ft.
Montana Power Gas Co. No. 1 Winkler, C SE SE sec. 28-32-5w. Drlg. 2,390 ft.
Montana Power Gas Co. No. 1-G State, NW NW SE sec. 16-35n-5w. Loc. (first report).
Montana Power Gas Co. No. 1 Mueller, C SE SE sec. 7-33n-5w. Drlg. 2,010 ft.
Nadeau Bros. No. 1 Ewald, C NE SW sec. 9-32n-5w. R.U.
Par Oil Co. No. 7 Haines, NW SW SW sec. 2-34n-6w. Drlg. 2,600 ft.
H. R. Patterson No. 1 Miller, C NE NE sec. 1-33n-6w. T.D. 2,800 ft.; fsg.
Stanley Gray No. 1 Allotted-132, NW SE NW sec. 22-34-7w. Drlg. 3,340 ft.
Jack Marshall No. 1 Allotted-119, C SE SW sec. 1-32n-6w. Drlg. 1,150 ft.
Steel Creek Prod. Co. No. 1 Tarrant, C NW SW sec. 19-34n-5w. Drlg. 1,810 ft.
R. C. Tarrant No. 8 Haglund, Jr., C NE NW sec. 13-34n-6w. R.O.G. (first report).
R. C. Tarrant No. 1 Sherburne, 1,980 ft. N SE cor. sec. 4-32n-6w. Drlg. 475 ft.
R. C. Tarrant No. 6 Getty, SE NE SW sec. 2-34n-6w. Rng. 8¼-in. cave string at 1,825 ft.
Texas Co. No. 1 Govt., C SW NE sec. 17-32n-5w. Cmtd. 7-in. 2,920 ft.; W.O.C.
Whetstone et al No. 1 Tribal-125, SW NE NE sec. 12-32n-6w. R.U.
Whetstone et al No. 1 Tribal-118, C SW SW sec. 1-32n-6w. Drlg. 640 ft.
Wilkinson et al No. 1 Allotted-127, C NE NE sec. 1-32n-6w. Drlg. 2,150 ft.
Stanley Gray No. 1 Allotted-132, NW SE NW sec. 22-34n-7w. T.D. 3,580 ft.; U.R. 8¼-in.; 200 ft. wtr. in Cut Bank; top Ellis 3,550 ft.

Petroleum County

H. C. Rowland No. 3 Govt., CEL NE SW sec. 18-17n-24e. Drlg. 407 ft. (cor.).
West Dome Oil Co. No. 1, SW SE NE sec. 9-15-29e. T.D. 1,444 ft.; perforated pipe at 1,260-75 ft. in first Cat Creek; R.U. to pump.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15w. Drlg. 360 ft. (cor.).

Pondera County

The Texas Co. No. 1 Valier Unit No. 1, C NW SE section 32-31-5w, the last of a group of tests drilled 15 miles south of the Cut Bank field in an effort to locate the shore line from which the Cut Bank production comes, was plugged and abandoned. It was drilled to 2,919 feet. It had 1,500 feet of water in the Sunburst sand at 2,750-2,800 feet. The top of the Cut Bank was at 2,855 feet and the top of the Ellis at 2,900 feet. The Cut Bank yielded 2,000 feet of water. The elevation is 3,630 feet. The top of the Colorado was at 540 feet. The company leased a large block between Valier and the Cut Bank field and formed five unitized areas. Its No. 1 Unit 5 was drilled in the C SW SW section 3-30n-5w, and was abandoned at 2,912 feet. Its No. 1 Unit 2, NE SW NW section 21-30n-5w, went to the Madison at 3,153 feet and was abandoned. With the abandonment of No. 1 Unit 1 the wildcatting program was completed.

Wm. M. Fulton No. 1-A Price, SW NE NE sec. 18-27n-4w. T.D. 1,992 ft.; cmtd. 6⅝-in. 10 sacks.
Clinch Pet., Ltd., No. 1 Hollan, NW SW NW sec. 12-23-6w. Cmtd. cave at 2,009 ft.; W.O.C.
Gordon Campbell No. 1 Hughes, NW NE NW sec. 12-30n-4w. Drlg. 2,100 ft.
Jones-Chambers No. 1 Erickson, SW SE SW sec. 3-27-4w. Bldg. drk.

Teton County

R. C. Tarrant No. 1 Wallenstein, NW NW SW sec. 9-27-5w. T.D. 1,350 ft.; fsg. bit.

Toole County

Four wells were completed and two reported completed were tested after acidizing in the Kevin-Sunburst field. The Big West Oil Co. No. 2 Dalquist, NW NE NW section 21-35n-3w, which was reported a completion last week and dry in the Ellis-Madison at 1,797-1,804 feet, was treated with 1,000 gallons under 400 pounds pressure for 72 hours. It responded by flowing, but no gauge was taken. The lime was hard and tight and it will be acidized again.

A. E. Crumley No. 9 Shaw, SE SW NE section 35-36n-2w, which had 350 feet of oil from the Sunburst at 1,536-66 feet, was shot and acidized and responded by pumping 75 bbls. a day.

Watson No. 1 Leach, SE SE NE section 31-35n-3w, was drilled to 1,765 feet, 3 feet in the contact, and made 10 bbls. of oil and 20 bbls. of water first 24 hours after acidizing.

William McKnight No. 3 Seabrook, NE NW SW section 19-35n-2w, which had only a show of oil in the Ellis-Madison at 1,555-88 feet, was acidized with 1,000 gallons and is pumping 125 bbls. initial.

Nepstead & Vanderpas No. 1 Solberg, NE NW SE section 20-35n-3w, which had 50 feet of oil in the Ellis-Madison at 1,863-73 feet, is making 40 to 50 bbls. a day on the pump after acidizing.

Continental Oil Co. No. 9 State, SE SW NE section 16-35-2w, pumped 24 bbls. first 24 hours after acidizing at total depth of 1,565 feet. The Sunburst was at 1,322-28 feet.

Alexander-Sorrell No. 1 Strange, NE NE SE sec. 31-35n-3w. S.D. 800 ft. for repairs.
Agen & Goeddertz No. 2 Goeddertz, C SE NE sec. 16-35n-3w. Drlg. 200 ft. in quicksand.
Boru Oil Co. No. 1 Reynolds, SW NE NW sec. 31-33n-4w. Drlg. 1,000 ft.
Cassidy & Cassidy No. 2 Carlson, W½ SE NE sec. 22-35n-3w. Drlg. 700 ft.
Carscallen & Mitchener No. 1 Krueger, 1,320 ft. W of E line, 1,980 ft. S of N line, sec. 10-34n-2w. T.D. 1,650 ft.; acidized; did not recover load.
Coolidge & Coolidge No. 1 Maley, SW SW SW sec. 30-36n-1w. Loc. (first report).
Coolidge & Coolidge No. 1 Hanlon, SW SW SE sec. 26-36n-2w. Drlg. 1,025 ft.
Coolidge & Coolidge No. 2 Shaw, SE SE SE sec. 26-36n-2w. Drlg. 1,258 ft.
Continental Oil Co. No. 8 State, NE SE NE sec. 16-35n-2w. Spdg. 40 ft.
Cook & Eddy No. 1 Larum, NE SE NW sec. 25-36n-2w. Spdg. 50 ft.
Imperial-Craig Oil Co. No. 19 Bluhm, NE NW NW sec. 19-35n-1w. T.D. 1,800 ft.; will acidize.
T. H. Harriman No. 1 Beaupre, SW SW SW sec. 5-35n-2w. R.U.
T. P. Kyle No. 1 Wolnsti, CSL SE SE sec. 3-37n-1w. Drlg. 1,300 ft.
Ke-Sun Oil Co. No. 7 Stewart, NE NE sec. 25-35n-3w. Top Ellis-Madison 1,507 ft.; will acidize.
Munger No. 1 Peterson, NW NW SW sec. 8-35n-2w. T.D. 1,200 ft.; fsg.
C. T. Olen No. 6 Engemoen, SE SW NW sec. 14-35n-2w. Drlg. 1,462 ft.
E. O. Reickoff No. 2 Govt., SW SW NE sec. 3-35n-3w. Drlg. 1,790 ft.
Welch Bros. No. 1 Dewald, SW NE NE sec. 26-36n-2w. T.D. 1,787 ft.; fsg.
Superior Oil Co. No. 5 Haugen, SE SE NE sec. 11-35n-3w. Drlg. 1,400 ft.
R. C. White No. 2 Haugen, CNL NE SE sec. 11-35n-3w. Drlg. 1,410 ft.

Petroleum County

West Dome Oil Co. No. 1, SW SE NE section 9-15n-29e, Cat Creek field, was drilled to 1,444 feet and perforated pipe at 1,260-75 feet and completed in the first Cat Creek sand for 4 bbls. daily.

UTAH

Daggett County

Mountain Fuel Supply Co. No. 1 State, NW SE SW sec. 16-3n-24e. Spdg. 90 ft.

Emery County

California Co. No. 1 Palm, Unit 1, C SW SW sec. 22-23s-11e. Erecting drk.

Grand County

Columbia Crude Oil Co. No. 1 Rath, a test of the Seven Mile Lake dome, is drilling in the Hermosa lime (Upper Pennsylvanian) formation at 965 feet. It started in the Rico and encountered the Hermosa at 134 feet. Two light shows of gas were encountered at 80 feet and 912 feet, but were of significance only for correlation purposes. The objective is the 33-foot sandy lime horizon in that area as the Cane Creek horizon.

Columbia Crude Co. No. 1 Rath, SW SE sec. 12-35n-20e. T.D. 965 ft.; fsg. for tools.
Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 32-22e. S.D. 4,880 ft. to resurvey; went through 2,400 ft. of Permian, Rico and Cutler beds.

Utah County

Diamond Oil Co. No. 4 Govt., CSL SE NW sec. 10-8s-5e. T.D. 3,956 ft.; cmtd. 3½-in. at 3,950 ft.

Summit County

Longwell Pet. Co. No. 1, SE SW SE sec. 35-3n-5e. T.D. 1,445 ft.; fsg.

Washington County

Arrowhead Pet. Corp. No. 1-A, SE SW NE sec. 1-43s-15w. Drlg. 2,477 ft. after cmtg. off tools.

LEGAL

PUBLIC AUCTION

THE UNIVERSITY OF TEXAS OIL AND GAS LEASES TO BE OFFERED FOR LEASE BY THE BOARD FOR LEASE OF UNIVERSITY LANDS

Pursuant to the provisions of Chapter 282 of the General and Special Laws of Texas, passed at the Regular Session of the Forty-first Legislature, approved March 29, 1929, and amended by Chapter 174 of the Acts of the Regular Session of the Forty-second Legislature, the Board for Lease of University Lands hereby offers for sale, subject to the right to reject any or all bids, at public auction in Austin, Texas, at the General Land Office on Monday, July 20, 1936, at ten o'clock A.M., the oil and gas rights in and under the following described University Lands.

ECTOR AND CRANE-ECTOR COUNTIES

Tract No.	Block	Section	Description
1	35	5	SW ¼
2	35	6	SW ¼
3	35	9	SE ¼
4	35	10	NW ¼

CRANE COUNTY

Tract No.	Block	Section	Description
5	30	17	NE ¼
6	30	17	SW ¼
7	30	18	NE ¼
8	31	1	NE ¼
9	31	12	NE ¼
10	31	13	NE ¼

ANDREWS COUNTY

Tract No.	Block	Section	Description
11	9	1	NW ¼
12	9	2	NW ¼
13	9	3	NW ¼
14	9	4	NW ¼
15	9	8	NW ¼
16	9	9	NW ¼
17	9	10	NW ¼
18	9	11	NW ¼
19	9	12	NW ¼
20	9	13	NW ¼
21	9	14	NW ¼
22	9	15	NW ¼
23	9	16	NW ¼
24	9	17	NW ¼
25	9	18	NW ¼
26	9	19	NW ¼
27	9	20	NW ¼
28	9	21	NW ¼
29	9	22	NW ¼
30	9	23	NW ¼
31	9	24	NW ¼
32	9	25	NW ¼
33	9	26	NW ¼
34	9	27	NW ¼
35	9	28	NW ¼
36	9	29	NW ¼
37	9	30	NW ¼
38	9	31	NW ¼
39	9	32	NW ¼
40	9	33	NW ¼
41	9	34	NW ¼
42	9	35	NW ¼
43	9	36	NW ¼
44	9	37	NW ¼
45	9	38	NW ¼
46	9	39	NW ¼
47	9	40	NW ¼
48	9	41	NW ¼
49	9	42	NW ¼
50	9	43	NW ¼
51	9	44	NW ¼
52	9	45	NW ¼
53	9	46	NW ¼
54	9	47	NW ¼
55	9	48	NW ¼
56	12	5	NW ¼
57	12	6	NW ¼
58	12	18	NE ¼
59	12	20	SW ¼
60	12	31	SW ¼
61	12	32	SE ¼
62	13	1	SW ¼
63	13	3	NW ¼
64	13	14	NW ¼
65	13	24	NE ¼
66	13	35	NE ¼
67	13	46	NE ¼

UPTON COUNTY

Tract No.	Block	Section	Description
68	14	3	NW ¼
69	14	20	NE ¼
70	15	2	SE ¼
71	15	3	NW ¼
72	15	4	SE ¼

WARD COUNTY

Tract No.	Block	Section	Description
73	16	26	NW ¼
74	16	26	SW ¼
75	16	27	NE ¼
76	16	27	SE ¼

All leases shall carry a royalty of ⅛ of the value of the gross production of oil and gas therefrom. The Board has fixed an annual delay rental of not less than 50c per acre on each tract offered.

All oil and gas leases sold at this auction will be for a term of five years, or as long thereafter as oil and/or gas is being produced in paying quantities therefrom. Each tract as herein advertised will be a separate and distinct lease from each and all other tracts. There is no limit as to the number of such tracts that may be bid in by any party or company.

Dated at Austin, Texas, this 14th day of March, A.D. 1936.

BOARD FOR LEASE OF UNIVERSITY LANDS.

By: K. H. Aynesworth, Chairman.
Mrs. I. D. Fairchild, Member.
J. H. Walker, Land Commissioner.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status—
Shell Oil Co., No. 16 Capitan, Santa Barbara Co.	32- 5-30	1,552	sd. sh. drlg.
Shell Oil Co., No. 17 Capitan, Santa Barbara Co.	32- 5-30	1,465	sd. sh. drlg.
Barnsdall-Rio Grande, No. 8A-88 Elwood, S. Barbara	tideland	3,672	will cmt.
Bush Oil Co., No. 1 Santa Maria, Santa Barbara Co.	13-10-34	2,004	dry, abd.
Union Oil Co., No. 6 Santa Maria, Santa Barbara Co.	24-10-34	2,716	O.S. drlg.
Union Oil Co., No. 16 Orcutt, Santa Barbara Co.	26- 9-34	3,880	O.S. drlg.
Fields, O. C., No. 1 Lompoc, Santa Barbara Co.	11- 7-33	1,450	will deepen
Moore, Inc., No. 1 Santa Maria, Santa Barbara Co.	25-10-35	4,251	hd. sh. drlg.
Top Row Oil Co., No. 1 Lompoc, Santa Barbara Co.	10- 6-35	139	sd. sh. drlg.
Bankline Oil Co., No. 1 Coal Oil Pt., Santa Barbara Co.	tideland	5,510	redrlg. 2,198
Union Oil Co., No. 10 Bardsdale, Ventura Co.	12- 3-20	6,374	O.S. drlg.
Calco Pet. Co., No. 1 Las Posas, Ventura Co.	17- 3-20	3,479	pump. 220 b.d.
Calkan Pet. Co., No. 1 Sespe, Ventura Co.	23- 5-20	576	cleaning out
Supreme Oil Co., No. 1 Sespe, Ventura Co.	1- 4-20	905	cmtd. 869
Condor Oil Co., No. 1 Sespe, Ventura Co.	6- 4-19	1,376	hd. sh. drlg.
Topa Topa Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	1,998	hd. sd. drlg.
Washi Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	201	cleaning out
Bestco Pet. Co., No. 1 Shiells Canyon, Ventura Co.	2- 3-19	4,560	gr. sd. drlg.
Petroleum Securities, No. 1 Shiells Canyon, Ventura Co.	3- 3-19	3,899	cmtd. 3,899
The Texas Co., No. 130 Shiells Canyon, Ventura Co.	4- 3-19	3,898	sd. sh. drlg.
The Texas Co., No. 131 Shiells Canyon, Ventura Co.	4- 3-19	3,360	sd. sh. drlg.
El Rancho Oil Co., No. 1 Shiells Canyon, Ventura Co.	9- 3-19	4,564	hd. sd. drlg.
Bolsa Chica Oil Co., No. 3 Temescal, Ventura Co.	4- 4-18	3,290	O.S. drlg.
Bolsa Chica Oil Co., No. 4 Temescal, Ventura Co.	4- 4-18	802	sd. sh. drlg.
Ventura Expl. Co., No. 1 Saticoy, Ventura Co.	30- 3-22	7,990	gr. sd. drlg.
General Pet. Corp., No. 2 Oxnard, Ventura Co.	26- 2-23	7,996	sd. sh. drlg.
Continental Oil Co., No. 5 San Miguelito, Ventura Co.	24- 3-24	6,035	redrlg. 5,964
C. C. M. Oil Co., No. 1 Javon, Ventura Co.	15- 3-24	4,813	cmtd. 4,600
Continental Oil Co., No. 2 Pirie, Ventura Co.	13- 4-23	1,223	pump. 30 b.d.
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	6,885	sd. sh. drlg.
East Puente Oil Co., No. 21 McKittrick, Kern Co.	11-30-21	1,265	pump. 68 b.d.
Calcrude Pet. Co., No. 1 McKittrick, Kern Co.	34-30-22	1,504	P.B. 1,460
Welport Oil Co., No. 15 McKittrick, Kern Co.	26-29-21	1,076	sd. sh. drlg.
Bergman, H. L., No. 1 McKittrick, Kern Co.	30-30-22	1,231	sd. sh. drlg.
Rio Grande Oil Co., No. 1 Belridge, Kern Co.	18-28-20	510	sd. sh. drlg.
Standard Oil Co., No. 4 North Belridge, Kern Co.	36-27-20	8,300	cmtd. 8,225
Associated Oil Co., No. 5 North Belridge, Kern Co.	34-27-20	6,880	hd. sh. drlg.
Belridge Oil Co., No. 18-35 North Belridge, Kern Co.	35-27-20	7,900	sd. sh. drlg.
Belridge Oil Co., No. 17-35 North Belridge, Kern Co.	35-27-20	8,150	cmtd. 8,150
Union Oil Co., No. 20 North Belridge, Kern Co.	36-27-20	9,684	P.B. 9,200
Union Oil Co., No. 21 North Belridge, Kern Co.	36-27-20	8,274	br. sh. drlg.
C. C. M. Oil Co., No. 19 Kern Front, Kern Co.	23-28-27	1,939	sd. sh. drlg.
Republic Pet. Co., No. 14 Kern Front, Kern Co.	12-28-27	2,400	dry, abd.
Seven Spot Oil Co., No. 1 Kern Front, Kern Co.	13-28-27	1,228	P.B. 1,210
The Texas Co., No. 5 Kern Front, Kern Co.	23-28-27	2,090	pump. 202 b.d.
National Oil Co., No. 7 Kern Front, Kern Co.	11-28-27	1,754	sd. sh. drlg.
General Pet. Corp., No. 7 Kern Front, Kern Co.	14-28-27	2,050	rig. to pump
American Expl. Co., No. 1 Kern Front, Kern Co.	16-28-27	2,862	looks wet
Ohio Oil Co., No. 11 Premier, Kern Co.	32-27-27	2,777	rig. to pump
Ausbrit Oil Co., No. 1 Premier, Kern Co.	20-27-27	2,139	P.B. 2,075
Bourke-Dyer Oil Co., No. 1 Dominion, Kern Co.	28-26-28	1,950	sd. sh. drlg.
Modoc Pet. Co., No. 1 Dominion, Kern Co.	28-26-28	1,521	reaming
Santa Carla Oil Co., No. 1 Dominion, Kern Co.	19-26-28	1,676	sd. sh. drlg.
Union Oil Co., No. 11 Mount Poso Tribe, Kern Co.	28-27-28	1,778	reaming
General Pet. Corp., No. 33 Mount Poso, Kern Co.	16-27-28	1,594	rig. to pump
Bargol Oil Co., No. 1 Mount Poso, Kern Co.	11-27-27	3,321	sd. sh. drlg.
Tilton & Harp, No. 1 Mount Poso, Kern Co.	6-27-28	2,450	may abd.
Dixie Lee Oil Co., No. 4 Fruitvale, Kern Co.	23-29-27	3,218	rig. to pump
Mosebach Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	4,121	pump. water
Trico Oil & Gas Co., No. 1 Fruitvale, Kern Co.	23-29-27	3,218	swabbing
H. L. J. Oil Co., No. 1 Fruitvale, Kern Co.	23-29-27	3,765	sd. sh. drlg.
Magnet Oil Co., No. 3 Fruitvale, Kern Co.	21-29-27	2,870	sd. sh. drlg.
Western Gulf Oil Co., No. 24 Fruitvale, Kern Co.	22-29-27	3,674	water witch
Western Gulf Oil Co., No. 26 Fruitvale, Kern Co.	27-29-27	3,524	P.B. 3,493
Mohawk Oil Co., No. 16 Fruitvale, Kern Co.	26-29-27	3,454	O.S. drlg.
Mohawk Oil Co., No. 17 Fruitvale, Kern Co.	23-29-27	1,076	sd. sh. drlg.
Tarr & McComb, No. 3 Fruitvale, Kern Co.	23-29-27	3,850	redrlg. 3,190
Nydia Pet. Co., No. 1 Fruitvale, Kern Co.	26-29-27	3,568	gas blow out
Allied Pet. Co., No. 19 Mountain View, Kern Co.	19-30-29	1,594	sd. sh. drlg.
Hogan Pet. Co., No. 15 Mountain View, Kern Co.	4-31-29	6,010	flow. 1,280 b.d.
Hogan Pet. Co., No. 16 Mountain View, Kern Co.	32-30-29	4,170	sd. sh. drlg.
Standard Oil Co., No. 30 Mountain View, Kern Co.	18-30-29	3,520	sd. sh. drlg.
Buffalo Oil Co., No. 3 Mountain View, Kern Co.	19-30-29	5,009	cmtd. 4,615
Petrol Prod. Co., No. 1 Mountain View, Kern Co.	32-30-29	5,896	flow. 1,390 b.d.
Shell Oil Co., No. 11 Mountain View, Kern Co.	32-30-29	5,250	flow. 400 b.d.
Vesta Pet. Co., No. 10 Mountain View, Kern Co.	19-30-29	5,110	cmtd. 4,875
Mohawk Pet. Co., No. 1 Arvin, Kern Co.	10-31-29	5,532	sd. sh. drlg.
R. & R. Dev. Co., No. 3 Arvin, Kern Co.	32-30-30	872	granite
Ohio Oil Co., No. 1 Rio Bravo, Kern Co.	1-30-25	8,363	sd. sh. drlg.
Barnsdall Oil Co., No. 5 Round Mountain, Kern Co.	7-28-29	1,851	pump. 260 b.d.
Shell Oil Co., No. 9 Round Mountain, Kern Co.	7-28-29	1,054	sd. sh. drlg.
Shell Oil Co., No. 14 Round Mountain, Kern Co.	7-28-29	1,890	rig. to pump
Shell Oil Co., No. 15 Round Mountain, Kern Co.	20-28-29	1,540	sd. sh. drlg.
Petroleum Securities, No. 5 Round Mountain, Kern Co.	6-28-29	480	sd. sh. drlg.
Honolulu Oil Corp., No. 56 Round Mountain, Kern Co.	18-28-29	1,940	rig. to pump
Honolulu Oil Corp., No. 11 Round Mountain, Kern Co.	20-28-29	1,531	sd. sh. drlg.
Corbett, R. E., No. 1 Edison, Kern Co.	23-30-29	753	sd. sh. drlg.
Jergins Trust, No. 24 Edison, Kern Co.	23-30-29	1,690	pump. 201 b.d.
Jergins Trust, No. 25 Edison, Kern Co.	14-30-29	2,502	P.B. 1,855
Jergins Trust, No. 26 Edison, Kern Co.	23-30-29	1,651	sd. sh. drlg.
Union Oil Co., No. 4 Edison, Kern Co.	14-30-29	1,463	cleaning out
Wood-Callahan Oil Co., No. 1 Edison, Kern Co.	21-30-29	3,186	pump. 105 b.d.
Wood-Callahan Oil Co., No. 2 Edison, Kern Co.	23-30-29	2,072	rig. to pump
Higgins, W. F., No. 1 Edison, Kern Co.	17-30-29	3,897	sd. sh. drlg.
M. & L. Oil Co., No. 1 Edison, Kern Co.	23-30-29	2,078	C.P. 1,940
The Texas Co., No. 1 San Emidio, Kern Co.	11-11-22	7,622	C.O. 7,440
Bender, E. A., No. 1 San Emidio, Kern Co.	14-10-23	792	sd. sh. drlg.
Elk Hills Pet. Co., No. 1 Elk Hills, Kern Co.	14-31-24	2,198	sd. sh. drlg.
C. C. M. Oil Co., No. 17 Midway-Sunset, Kern Co.	21-32-23	2,105	pump. 428 b.d.
C. C. M. Oil Co., No. 1-28 Midway-Sunset, Kern Co.	28-32-23	460	sd. sh. drlg.
Evans, H. B., No. 11 Midway-Sunset, Kern Co.	35-32-23	860	O.S. drlg.
Gibson Oil Co., No. 5 Midway-Sunset, Kern Co.	8-11-23	3,050	will cmtd.
General Pet. Corp., No. 15-B Midway-Sunset, Kern Co.	6-11-23	2,388	pump. 110 b.d.
General Pet. Corp., No. 335 Midway-Sunset, Kern Co.	35-12-24	2,043	cmtd.
North American Oil Co., No. 2 Midway-Sunset, Kern.	2-32-24	3,181	sd. sh. drlg.
Signal Oil Co., No. 6 Midway-Sunset, Kern Co.	8-11-23	2,955	sd. sh. drlg.
Hoyt, Otis, No. 2 Midway-Sunset, Kern Co.	1-11-24	291	sd. sh. drlg.
Standard Oil Co., No. 203 Midway-Sunset, Kern Co.	5-11-23	2,435	pump. 108 b.d.
Standard Oil Co., No. 9 Midway-Sunset, Kern Co.	5-11-23	3,265	sd. sh. drlg.
Standard Oil Co., No. 55 Midway-Sunset, Kern Co.	33-32-24	3,194	sd. sh. drlg.
South Cerritos Oil Co., No. 1 Midway-Sunset, Kern Co.	23-32-23	1,590	rig. to pump
Alford Oil Co., No. 5 Midway-Sunset, Kern Co.	4-32-23	3,367	pump. 50 b.d.
Burkeholder Oil Corp., No. 1 Midway-Sunset, Kern Co.	23-32-23	2,536	P.B. 2,230
Stimson Oil Co., No. 1 Midway-Sunset, Kern Co.	27-32-23	960	sd. sh. drlg.
Union Oil Co., No. 8 Midway-Sunset, Kern Co.	25-12-24	2,507	will deepen
The Texas Co., No. 15 Midway-Sunset, Kern Co.	32-32-24	2,850	pump. 500 b.d.
Obispo Oil Co., No. 12 Midway-Sunset, Kern Co.	32-12-23	3,721	br. sh. drlg.
St. Helens Pet. Co., No. 1 Midway-Sunset, Kern Co.	22-32-24	3,310	fish. csg.
Jerman, R. W., No. 1 Midway-Sunset, Kern Co.	31-12-23	3,380	P.B. 2,780
Ohio Oil Co., No. 1 Tejon, Kern Co.	36-11-19	3,982	sd. sh. drlg.
Tejon Ridge Oil Co., No. 1 Tejon, Kern Co.	23-32-29	2,400	hd. sd. drlg.
Reserve Oil & Gas Co., No. 5 Tejon, Kern Co.	33-11-19	691	sd. sh. drlg.
Western Gulf, No. 3 Cantua, Fresno Co.	3-17-15	7,050	sd. sh. drlg.
Conlon, J. M., No. 1 Coalinga, Fresno Co.	30-19-15	1,120	sd. sh. drlg.
Standard Oil Co., No. 2 South Coalinga, Fresno Co.	31-21-15	731	sd. sh. drlg.
Union Oil Co., No. 1 Lillis-Welsh, Fresno Co.	24-21-16	11,127	P.B. 10,729
K. N. D. A., No. 2 Kettleman North, Fresno Co.	20-21-17	8,378	cleaning out
K. N. D. A., No. 38 Kettleman North, Fresno Co.	18-21-17	8,342	sd. sh. drlg.
K. N. D. A., No. 43 Kettleman North, Fresno Co.	30-21-17	6,280	sd. sh. drlg.
K. N. D. A., No. 74 Kettleman North, Fresno Co.	30-21-17	8,300	cmtd. 8,299
K. N. D. A., No. 81 Kettleman North, Fresno Co.	24-21-16	7,950	br. sh. drlg.
K. N. D. A., No. 83 Kettleman North, Kresno Co.	24-21-16	6,755	br. sh. drlg.
K. N. D. A., No. 36 Kettleman North, Kings Co.	36-22-18	9,733	P.B. 8,550
K. N. D. A., No. 83 Kettleman North, Fresno Co.	32-21-17	7,472	br. sh. drlg.
K. N. D. A., No. 21 Kettleman North, Fresno Co.	34-21-17	8,000	sd. sh. drlg.
Standard Oil Co., No. 38 Kettleman North, Fresno Co.	27-21-17	7,373	recmtd. 7,368
Standard Oil Co., No. 25 Kettleman North, Fresno Co.	19-21-17	8,172	sd. sh. drlg.
Standard Oil Co., No. 43 Kettleman North, Fresno Co.	19-21-17	8,000	sd. sh. drlg.
Standard Oil Co., No. 56 Kettleman North, Fresno Co.	19-21-17	7,985	cmtd. 7,918
Standard Oil Co., No. 65 Kettleman North, Fresno Co.	19-21-17	7,920	test. W.S.O.
Standard Oil Co., No. 72 Kettleman North, Fresno Co.	19-21-17	8,131	P.B. 8,090
Standard Oil Co., No. 78 Kettleman North, Fresno Co.	29-21-17	7,942	sd. sh. drlg.
Standard Oil Co., No. 3 Kettleman Middle, Kings Co.	19-23-19	130	sd. sh. drlg.
Kettleman View Oil Co., Well No. 1, Kings Co.	29-22-19	1,830	sd. sh. drlg.
Hurndall, John, No. 1 Pyramid Hills, Kings Co.	16-24-18	1,986	pump. test
Commonwealth Consd. Gas, No. 2 Tulare Lake, Kings	21-22-20	2,500	hd. sh. drlg.
Associated Oil Co., No. 1 Avenal, Kings Co.	35-23-17	1,000	sd. sh. drlg.
United Oil Co., No. 1 Panorama, San Luis Obispo Co.	2-32-21	1,198	hd. sh. drlg.
Taft Well Drlg. Co., No. 1 Pismo, San Luis Obispo Co.	31-31-13	4,296	P.B. 1,500
Martin, J. D., No. 4 Pismo, San Luis Obispo Co.	5-32-13	2,262	sd. sh. drlg.
Martin, J. D., No. 5 Pismo, San Luis Obispo Co.	5-32-13	1,996	sd. sh. drlg.
Birch-Royer Oil Co., No. 1 Pismo, San Luis Obispo Co.	33-31-13	1,850	cleaning out
Jergins Trust, No. 1 Pismo, San Luis Obispo Co.	5-32-13	114	sd. sh. drlg.
Barnsdall Oil Co., No. 1 Carissa Plains, S. Luis Obispo	24-28-17	3,559	redrlg. 3,500
Burch, I. L., No. 1 Cuyama, San Luis Obispo Co.	4-10-26	275	sd. sh. drlg.
Pure Oil Co., No. 4 Chowchilla, Madera Co.	20-10-14	2,741	sd. sh. drlg.
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-24- 3	8,030	hd. sh. drlg.
Shell Oil Co., No. 1 Branch, Monterey Co.	34-24-10	8,994	P.B. 8,750
The Texas Co., No. 2 Eureka, Humboldt Co.	22- 3- 1	4,428	blew out
Amerada Pet. Co., No. 1 Rio Vista, Solano Co.	26- 4- 2	4,485	gas, shut in
Fortine, W. H., No. 1 Terra Bella, Tulare Co.	22-22-26	2,752	sd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg., or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr. or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status—
Marvin, J. L., No. 1 El Segundo, Los Angeles Co. ...	7- 3-14	7,531	P.B. 7,475
Ohio Oil Co., No. 1 El Segundo, Los Angeles Co.	7- 3-14	5,900	sd. sh. drlg.
Signal Finance, No. 1 Hawthorne, Los Angeles Co. ...	10- 3-14	4,372	sd. sh. drlg.
Roach, W. C., No. 1 Torrance, Los Angeles Co.	31- 3-14	1,431	sd. sh. drlg.
White Five Oil Co., No. 1 Torrance, Los Angeles Co. .	31- 3-14	3,385	pump. test
Langstaff Pet. Co., No. 1 Torrance, Los Angeles Co..	31- 3-14	2,525	sd. sh. drlg.
Sterling Oil Co., No. 1 Torrance, Los Angeles Co. ...	31- 3-14	3,605	prod. test
Dumas-Brown Oil Co., No. 2 Torrance, Los Angeles Co.	6- 4-14	211	sd. sh. drlg.
Dumas-Lewis Oil Co., No. 2 Torrance, Los Angeles Co.	6- 4-14	3,360	sd. sh. drlg.
B. & N. Oil Co., No. 1 Torrance, Los Angeles Co.	18- 4-14	3,870	sd. sh. drlg.
Lawler Pet. Co., No. 2 Torrance, Los Angeles Co.	31- 3-14	3,075	sd. sh. drlg.
Macvan Oil Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	3,741	pump. 148 b.d.
The Texas Co., No. 6 Redondo, Los Angeles Co.	5- 4-14	1,471	sd. sh. drlg.
Continental Royalties, No. 1 Torrance, Los Angeles Co.	6- 4-14	3,500	reaming
Rennek Oil & Gas Co., No. 1 Torrance, Los Angeles Co.	5- 4-14	3,448	bailing
C. C. M. Oil Co., No. 23 Torrance, Los Angeles Co. ...	8- 4-14	4,854	bailing
Standard Oil Co., No. 78 Inglewood, Los Angeles Co..	17- 2-14	4,024	flow. 3,760 b.d.
Standard Oil Co., No. 19 Inglewood, Los Angeles Co..	17- 2-14	3,541	sd. sh. drlg.
Silver Pet. Co., No. 1 Inglewood, Los Angeles Co.	16- 2-14	2,540	sd. sh. drlg.
Shell Oil Co., No. 22 Inglewood, Los Angeles Co.	8- 2-14	2,873	sd. sh. drlg.
West American Oil Co., No. 1 Domingues, Los Angeles	3- 4-13	9,001	C.P. 8,497
Shell Oil Co., No. 7 Domingues Reyes, Los Angeles Co.	33- 3-13	5,700	O.S. drlg.
Shell Oil Co., No. 34 Domingues Reyes, Los Angeles	33- 3-13	1,931	sd. sh. drlg.
Union Oil Co., No. 8 Domingues Carson, Los Angeles	33- 3-13	7,306	fish. D.P.
Union Oil Co., No. 47 Domingues Callender, L. Angeles	33- 3-13	6,291	sd. sh. drlg.
Union Oil Co., No. 43 Domingues Hellman, Los Angeles	32- 3-13	3,891	sd. sh. drlg.
Union Oil Co., No. 38 Domingues Callender, L. Angeles	33- 3-13	6,773	sd. sh. drlg.
Barnsdall Oil Co., No. 15 Rosecrans, Los Aneiges Co..	18- 3-13	5,953	sd. sh. drlg.
Republic Pet. Co., No. 1 Rosecrans, Los Angeles Co..	18- 3-13	5,183	sd. sh. drlg.
Associated Oil Co., No. 18 Seal Beach, Los Angeles Co.	11- 5-12	6,380	O.S. drlg.
Continental Oil Co., No. 39 Seal Beach, Los Angeles.	3- 5-12	4,903	redrlg. 4,793
Eastern Oil Co., No. 1 Del Rey, Los Angeles Co.	22- 2-15	7,436	swabbed
Union Oil Co., No. 23 Del Rey, Los Aneles Co.	27- 2-15	1,571	sd. sh. drlg.
Yant Pet. Corp., No. 1 Newhall, Los Angeles Co.	1- 3-16	2,063	sd. sh. drlg.
Holbrook Pet. Co., No. 1 Newhall, Los Aneles Co.	28- 4-16	472	sd. sh. drlg.
Hull, James, No. 1 Wilmington, Los Angeles Co.	20- 4-13	3,870	O.S. drlg.
Codri Oil Co., No. 1 Wilmington, Los Angeles Co.	29- 4-13	3,901	P.B. 3,540
General Pet. Corp., No. 1 Wilmington, Los Angeles Co.	4- 5-13	3,019	deepening
Monarch Oil Corp., No. 1 Topango Canyon, L. Angeles	5- 1-16	1,530	sd. sh. drlg.
Standard Oil Co., No. 82 Montebello, Los Angeles Co..	2- 2-12	8,653	hd. sh. drlg.
Standard Oil Co., No. 85 Montebello, Los Angeles Co..	2- 2-12	3,000	P.B. 2,885
Standard Oil Co., No. 86 Montebello, Los Angeles Co..	2- 2-12	2,471	sd. sh. drlg.
Universal Consd., No. 7 Montebello, Los Angeles Co...	5- 2-11	3,852	sd. sh. drlg.
Universal Consd., No. 8 Montebello, Los Angeles Co...	5- 2-11	2,460	sd. sh. drlg.
Richfield Oil Co., No. 1 Montebello, Los Angeles Co...	5- 2-11	5,901	flow. 1,630 b.d.
Richfield Oil Co., No. 3 Montebello, Los Angeles Co...	5- 2-11	1,268	sd. sh. drlg.
North American, No. 2 Montebello, Los Angeles Co. ..	5- 2-11	6,302	cleaning out
St. Helens Pet. Co., No. 7 Montebello, Los Angeles Co.	5- 2-11	5,585	recmtd. 5,464
Keystone Oil Co., No. 1 Pico, Los Angeles Co.	9- 2-11	4,350	sd. sh. drlg.
General Pet., No. 46-D Santa Fe Springs, Los Angeles	6- 3-11	3,380	sd. sh. drlg.
General Pet., No. 137-F. Santa Fe Springs, Los Angeles	5- 3-11	5,489	P.B. 5,250
Union Oil Co., No. 92 Santa Fe Springs, Los Angeles.	31- 2-11	4,565	bailing
Union Oil Co., No. 21 Santa Fe Springs, Los Angeles	5- 3-11	3,361	sd. sh. drlg.
Bernstein, M. E., No. 1 Artesia, Los Angeles Co.	25- 3-12	5,888	redrlg. 4,420
McVicar & Rood, No. 1 San Jose Hills, Los Angeles	6- 2- 9	2,872	sd. sh. drlg.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co. ..	36- 5- 5	2,510	hd. sh. drlg.
Commander Oil Co., No. 1 Newport, Orange Co.	29- 6-10	2,125	pump. 5 b.d.
Hillman & Long, No. 1 Westminister, Orange Co.	14- 5-11	7,701	cmtd. 6,557
Five Point Oil Co., No. 1 Huntington, Orange Co.	36- 5-11	2,172	sd. sh. drlg.
West American Oil Co., No. 1 East Coyote, Orange Co.	24- 3-10	3,986	sd. sh. drlg.
Bartholomae Oil Co., No. 2 East Coyote, Orange Co. .	24- 3-10	4,717	cmtd. 4,717
Daly Oil Co., No. 1 East Coyote, Orange Co.	20- 3- 9	2,530	sd. sh. drlg.
Union Oil Co., No. 22 Chapman Richfield, Orange Co.	30- 3- 9	2,986	testing
Union Oil Co., No. 29 Chapman Richfield, Orange Co.	30- 3- 9	4,882	sd. sh. drlg.
Union Oil Co., No. 31 Chapman Richfield, Orange Co.	30- 3- 9	4,290	sd. sh. drlg.
Union Oil Co., No. 32 Chapman Richfield, Orange Co.	30- 3- 9	3,403	pump. 90 b.d.
Calif. Eastern Oil Co., No. 1 Placentia, Orange Co. ..	31- 3- 9	4,520	redrlg. 3,460
Tehama Pet. Co., No. 2 Kraemer, San Bernardino Co.	33- 2- 8	566	sd. sh. drlg.
Tehama Pet. Co., No. 3 Kraemer, San Bernardino Co.	3- 3- 8	467	hd. sh. drlg.
Tehama Pet. Co., No. 4 Kraemer, San Bernardino Co.	32- 2- 8	401	hd. sd. drlg.
Equitable Pet. Co., No. 1 Wildcat, San Bernardino Co.	11-10- 5	2,421	hd. sd. drlg.

KANSAS

Week Ending July 4 (Descriptions are East unless marked otherwise)

Barber County

Sinclair Prairie Oil Co. No. 1 Gentry, NE cor. sec. 1-33-15w. R.U.R.

Barton County

J A. Brouk et al No. 1 Keil, SE SE NE sec. 11-16-15w. Drlg. 2,225 ft.

John Burton No. 1 Wendel, NE cor. sec. 13-18-11w. C.O. 63 ft.

G. H. Rose and W. H. Lant No. 1 Redetzke, NE NW NW sec. 1-16-11w. U.R. 10-in. csg. 714 ft.

Rose Spring Drlg. Co. et al No. 1 Rick, SW cor. sec. 1-19-11w. Siliceous 3,316 ft.; some saturation; to set csg.

Schermerhorn Oil Co. No. 1 Hunter, NE cor. sec. 29-18-15w. K.C. 3,194 ft.; La Motte; Juartsite 3,565-76 ft. T.D.; P.B. 3,534 ft.; gas gauged 39,000,000 ft.

Torry & Feaster No. 1 Feist, NE NE SE sec. 29-18-11w. Siliceous L. 3,430-32½ ft.; T.D.; potential; pumped 346 bbls. oil in 18½ hrs.

Wakefield & Johnson No. 1 Bumm, SW SW NE sec. 22-19-12w. Anhydrite 665 ft.; K.C. 3,155 ft.; drlg. 3,275 ft.

Butler County

Dalton et al No. 1 Miley, C SW NE sec. 17-27-5. S.D. 350 ft.

Ellis et al No. 1-A Pettit, SE SE NW sec. 21-28-6. Siliceous 3,160-63 ft.; pumped 18 bbls. oil and wtr.; acidized.

McGinnis et al No. 1 Hinnen, NE NE SW sec. 18-24-4. Drlg. 2,545 ft.

Rex & Morris No. 1 Olson, NW SW SE sec. 15-28-6. Siliceous 3,042-59 ft.; H.F.W. and S.D.

Clark County

Olson & Watchorn No. 1 Morrison, C SE SW sec. 17-32-21w. Set 15-in. csg. 250 ft.

Cowley County

Baden Prod. Co. No. 1 Sparks, SE SW NW sec. 35-33-4. H.F.W. 3,260 ft.; T.D. 3,266 ft.; D.&A.

DeGenther Oil Co. No. 1 Holt, NW NW SE sec. 15-30-5. Spd. and S.D.; abd.

W. M. McKnabb No. 1 Community, C NE NW sec. 14-34-3. Drlg. 2,515 ft.

A. D. Morton et al No. 1 Roger, SE SE NE sec. 1-31-4. Drlg. 1,575 ft.

Edwards County

Stanolind O. & G. Co. et al No. 1 Donovan, C SE SE sec. 14-26-18w. Anhydrite 1,167 ft.; K.C. 4,028 ft. (cor.); drlg. 4,437 ft.

Ellis County

Albec Oil Co. No. 1 Union Pacific, NE cor. sec. 9-13-20w. Oswald 3,418 ft.; Cong. 3,670 ft.; drlg. 3,700 ft.

Bradley Oil Co. et al No. 1 Penney-Wann, SE cor. sec. 13-15-20w. Anhy. 1,277 ft.; set 8-in. csg. 3,340 ft.; R.U.S.T.

Bridgeport Mch. Co. No. 1 Ubert, NE NE NW sec. 12-13-18w. Drlg. 1,110 ft.

Empire O. & R. Co. No. 1 Herl, SE cor. sec. 22-15-19w. Anhydrite 1,135 ft.; S.D. 2,775 ft.

Empire O. & R. Co. No. 1 Samuelson, NE NE SE sec. 31-11-16w. Set 15-in. csg. 475 ft.

Bridgeport Machine Co. et al No. 1 Madden Est., NE NW NW sec. 26-15-18w. Anhy. 1,150 ft.; Topeka 2,935 ft.; Oswald 3,260 ft.; acidized; pot. 400 bbls.; comp.

Champlin Refining Co. No. 1 Hadley, SE SW NE sec. 30-11-17w. M.I.M.

Jones & Shelbourne No. 1 Gunther, SE SE SW sec. 9-11-19w. Anhydrite 1,417 ft.; drlg. 1,690 ft.

Jones Bros. & Carpenter et al No. 1 Solomon, SE SE SW sec. 28-11-19w. Anhydrite 1,408 ft.; Oswald 3,340 ft.; Siliceous 3,629 ft.; T.D. 3,632 ft.; Pot. 600 bbls.; comp.

Kansas Dev. Corp. No. 1 Haller, SE SE NW sec. 10-11-18w. Anhydrite 1,190 ft.; drlg. 2,715 ft.

Lario O. & G. Co. et al No. 1 Cress, NE cor. sec. 13-11-17w. Loc.

Lario O. & G. Co. No. 1 Marshall, NW SE NE sec. 36-11-18w. Cellar.

Parrish & Denman No. 1 Walter, SE SW SE sec. 14-13-17w. Anhydrite 1,152 ft.; drlg. 3,483 ft.

Philhan Oil Co. No. 1 Gerstner, SW SW SE sec. 24-14-17w. 13-in. csg. 725 ft.

J. E. Trigg et al No. 1 Armbrister, SE SE SW sec. 6-11-19w. Anhydrite 1,517 ft.; drlg. 2,975 ft.

Twin Drlg. Co. et al No. 1 Schmidt, SW SW SE sec. 22-15-17w. Spd.

Vickers Pet. Co. No. 1 Kraus, SW SW NW sec. 22-14-19w. Anhy. 1,390 ft.; Oswald 3,420 ft.; set 8-in. csg. 3,444 ft.; R.U.S.T.

Wolf Creek Oil Co et al No. 1 Polifka, SW SW NE sec. 24-13-18w. R.U.

Ellsworth County

Roy Ramsey et al No. 1 Gregory, SW SW SE sec. 25-16-9w. Drlg. 1,945 ft.

York State Oil Co. No. 1 Koestle, NW NW SE sec. 12-17-9w. Salt 875 ft.; drlg. 965 ft.

Finney County

Helmerich & Payne No. 1 Jones, C SE sec. 34-26-34w. Drlg. 2,000 ft.

Graham County

Vickers Pet. Co. and Phillips Pet. Co. No. 1 Hutton, NE NE SE sec. 29-8-22w. Anhydrite 1,805 ft.; K.C. 3,473 ft.; drlg. 3,715 ft.

Greenwood County

Ward McGinnis No. 1 Lampe, NW NE SW sec. 26-24-8. S.D. 1,407 ft.

Guy Scott et al No. 1 Pedroja, SE NE SE sec. 6-26-10. Drlg. 520 ft.

Harper County

Marathon Oil Co. No. 1 Zellers, C SW NW sec. 17-35-8w. Wilcox sand 5,120 ft.; S.O. and gas, salty taste; T.D. 5,410 ft.; P.B. 4,400 ft.; Mississippi 4,778 ft.; in new hole; Viola 5,245 ft.; drlg. 5,286 ft.

Harvey County

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w. S.D. 2,907 ft.

Phillips Pet. Co. No. 1 Kaufman, NE NE NW sec. 2-22-2w. Drlg. 2,425 ft.

Haskell County

Helmerich & Payne et al No. 1 Larson, C SE sec. 28-28-32w. Rig.

Kuhn Bros. et al No. 1 Nilson, SW SW SE sec. 21-28-32w. Set 6-in. csg. 2,409 ft.; R.U.S.T.

Kingman County

D. R. Lauck et al No. 1 Prather, C SE sec. 18-27-8w. Chat 4,039 ft.; Viola 4,339 ft.; drlg. 4,460 ft.

W. C. McBride, Inc., No. 2-A Wooldridge, SW NE SE sec. 16-27-7w. Rig.

D. R. Lauck et al No. 1 Skilling, C E½ E½ SW sec. 33-27-8w. O.W.D.D.; drlg. 4,543 ft.

Oklahoma Oil Corp. et al No. 1 Reeves. NW cor. sec. 29-27-5w. Chat 3,740 ft.; Misener, 4,103 ft.; C.O. 4,150 ft.

Meade County

Pacific Midwest Oil Co. No. 1 Rexford, NE SE SW sec. 8-20-29w. M.I.M.

McPherson County

Empire O. & R. Co. No. 1 Cunningham, SE cor. sec. 26-18-1w. Chat 2,803 ft.; T. D. 2,832 ft.; P. 27 bbls. in 5 hrs.; set 8-in. csg. 2,824 ft.

T. C. Johnson, et al No. 1 A. R. Johnson, SW SW NW sec. 33-17-1w. H.F.W. 2,990-3,000 ft.; drlg. 3,025 ft.

Ness County

Continental Oil Co. No. 1 Thompson, C E½ E½ SW sec. 13-18-26w. Siliceous and S.O. 4,446-50 ft.; drlg. 4,505 ft.; 3,400 ft. oil in hole.

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Drlg. 475 ft.

Pawnee County

Kessler & Their et al No. 1 Gustafson, SW cor. sec. 27-20-16w. R.U.R.

Reno County

Continental Oil Co. and L. H. Wentz No. 1 Snook, NE NW SW sec. 10-22-8w. Loc.

Dickey Oil Co. No. 1-A Shepherd, NE NE NW sec. 22-26-9w. Chat 3,870 ft.; wtr., 4,161 ft.; P.B. 4,135 ft.; Simpson 4,237 ft.; drlg. 4,325 ft.

Foraker et al No. 1 Hiett, SE SW NE sec. 34-24-4w. S.O. 2,874 ft.; H.F.W. 3,075 ft.; S.D. 3,190 ft.

Graham et al No. 1 Miller, NE NE SE sec. 36-25-10w. R.U.R.

Miller et al No. 1 Detter, NE SE NW sec. 28-22-7w. Set 12-in. csg. 590 ft.

Pryor & Lockhart et al No. 1 Kerr, C NW sec. 23-23-8w. R.U.

Rose Spring Drlg. Co. No. 1 Swansen, NE NE NW sec. 1-23-5w. Drlg. 3,655 ft.

Rice County

Beardmore et al No. 1 Fuller, SW SW SE sec. 23-18-7w. K.C. 2,777 ft.; Cong. 3,-111-89 ft.; Simpson 3,212 ft.; set 7-in. csg. 3,204 ft.

Day No. 1 Mason, NW NE NE sec. 28-21-7w. Chat 3,388-3,400 ft.; T.D. 3,431 ft.; est. 20 B.P.D.

Gilmac Oil Co. No. 1 Sargent, SE cor. sec. 31-18-6w. C.O. 3,170 ft.

Gulf Oil Corp. No. 1 Steckel, SW cor. sec. 30-19-10w. Set 10-in. csg. 150 ft.

Saco Oil Co. et al No. 1 Haxton Est., NW NW NE sec. 30-19-8w. Rig.

Sage et al No. 1 Patton, SW cor. sec. 5-21-7w. Fsg. 118 ft.

Shell Pet. Corp. No. 1 Gordon, C W half W half NE sec. 21-21-10w. Bldg. rig.

Shell Pet. Corp. et al No. 1 Hafermann, C N½ N½ SE sec. 6-19-9w. Siliceous 3,192 ft.; T.D. 3,216 ft.; pumped 937 bbls. in 17¾ hrs.

Shell Pet. Corp. No. 1 Maughlin, NE NW SE sec. 11-20-8w. Siliceous 3,235-38 ft.; 36,500,000 ft. gas at 3,260 ft.; M.I. rotary.

Simpson & Noble et al No. 1 Pulliam, C S½ N½ NE sec. 35-19-8w. K.C. L. 3,-846 ft.; Viola 3,189 ft.; Simpson, 3,210 ft.; Siliceous 3,279 ft.; T.D. 3,305 ft.; gauged 45,178,000 ft. gas.

Simpson & Noble and Stanolind O. & G. Co. No. 1 Bowman, SW SW NW sec 22-19-10w. Anhy. 438 ft.; Siliceous 3,286-94 ft.; saturated core; drlg. cmt.

Rooks County

Buckner & Schoff No. 1 McConnel, NE cor. sec. 34-6-18w. Ponds.

Hartman & Blair et al No. 1 Hall, NW cor. sec. 25-10-17w. Anhydrite 1,323 ft.; drlg. 1,331 ft.

Helmerich & Payne et al No. 1 Bedard, C NE sec. 29-9-19w. Set 7-in. csg. 3,530 ft.; R.U.S.T.

L. C. D. Drlg. Co. et al No. 1 Westhusin, C NE SE sec. 11-9-17w. Drlg. 538 ft.

J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. Set 8-in. csg. 2,714 ft.

Murfin et al No. 1 Washusin, NE NE SE sec. 19-9-16w. C.O. 3,550 ft.

J. A. Shoemake No. 1 Stebbins, NE NE SW sec. 26-7-17w. Anhydrite 1,130 ft.; drlg. 2,095 ft.

Skaer Oil Corp. et al No. 1 Dryden, NE cor. sec. 28-10-17w. Drlg. 3,100 ft.

Rush County

Boyle & Grossman No. 1 Wilson, NE cor. sec. 33-17-19w. H.F.W. 3,537-45 ft.; U.R. 6-in. csg. 3,617 ft.

Pryor & Lockhart et al No. 1 Stegman. SW NW NE sec. 11-16-17w. Anhydrite 1,095 ft.; Siliceous 3,537 ft.; T.D. 3,550 ft.; P.B. 3,547 ft.; D.&A.

Russell County

Armer et al No. 1 Maier, NE NW NE sec. 20-15-14w. Anhydrite 840 ft.; drlg. 1,220 ft.

Central Pet. Co. No. 1 Benso "C," SE SE SW sec. 9-14-15w. Granite 3,308-13 ft.; P.B. 3,120 ft.; comp. for old potential 292 bbls.

Hartman & Blair No. 1 Johnston, NW cor. sec. 11-13-14w. Anhydrite 690 ft.; S.D. 2,023 ft.

Hartman & Blair No. 1 McAllister, SW SW SE sec. 24-13-15w. Anhydrite 940 ft.; Oswald 3,053 ft.; H.F.W. 3,134-41 ft.; set 5-in. liner 3,295 ft.

Lario O. & G. Co. et al No. 1 Steinert, NE NE SW sec. 21-15-15w. Anhy. 875 ft.; drlg. 2,586 ft.

Lee & Reser No. 1 Penix, SW SW SE sec. 13-14-13w. S.D. 420 ft.

R. C. Tarrant No. 1 Williamson, SE SE NW sec. 9-14-14w. Tarkio L. 2,515 ft.; T.D. 2,550 ft.; swbd. 5 B.P.H. and showing of wtr.; acidized with 1,000 gals.; made potential of 243 bbls. of oil.

Wakefield et al No. 1 Krug, NE NW SW sec. 7-15-14w. Anhydrite 845 ft.; Oswald 3,040 ft.; Siliceous 3,282 ft.; H.F.W. 3,283-85 ft.; D.&A.

Saline County

Ryan Consolidated Co. & Archer No. 1 Norton, NE cor. sec. 32-14-2w. R.U.

Sedgwick County

D. R. Lauck No. 1 McLean, SW SW SE sec. 1-27-1w. B.R.

Earl Wakefield et al No. 1 Howard, SE SE NE sec. 25-25-2. Rig.

Stafford County

Indian Terr. Illum. Oil Co. and Empire O. & R. Co. No. 1 Mellies, C N½ N½ NE sec. 6-22-11w. M.I.M.

C. H. Lebow et al No. 1 Wolk, SE SW NW sec. 3-21-12w. Set 10-in. 224 ft.; W.O.C.

Sumner County

Craft & Wilson No. 1 Nevitt, NE NW NE sec. 36-32-2e. Stalnaker 2,223 ft.; K.C. L. 2,608 ft.; H.F.W. 3,508-11 ft.; drlg. 3,529 ft.

Matthews & Derrington No. 1 Berry, NW NW SE sec. 14-35-1. Drlg. 3,650 ft.

E. B. Shawver No. 1 Judd, SW SE NE sec. 3-34-2. U.R. 2,215 ft.

Texas Co. No. 1 Reed, NE SE SE sec. 11-31-1w. R.U.S.T. 3,051 ft.

D. J. Wilson et al No. 1 Clark, 1,320 ft. from W and 25 ft. from S line of NW sec. 15-35-1w. Wilcox 4,394 ft.; S.D. 4,430 ft.

Trego County

Central Commercial No. 1 Wagg, NW NW SE sec. 17-13-21w. K.C. L. 3,548 ft.; C.O. 4,505 ft.

J. J. Hall et al No. 1 Deines, SE SE SE sec. 12-13-24w. Drlg. 2,120 ft.

Woodson County

N. C. Dunn No. 1 Dawson, C NW NE sec. 27-26-13. L. 1,505 ft.; T.D. 1,527 ft.; P.B. 1,200 ft.; H.F.O.; no test.

Lewis et al No. 1 Riggs, SW cor. sec. 10-26-14. S.D. 1,115 ft.

C. L. Sheedy et al No. 1 Fuhlhage, NE NW SW sec. 27-25-14. Set 6-in. csg. 1,431 ft.

OKLAHOMA

Week Ending July 4

NORTHERN OKLAHOMA

Beckham County

Jo-Gail Drlg. Co. No. 1 Gilliland, C NE NE sec. 33-8-26w. R.U.

Cleveland County

Hall-Briscoe, Inc., No. 1 Fant, SW SW NE sec. 27-10-2w. S.D. at 7,511 ft.

Coal County

Carter Oil Co. and Magnolia Pet. Co. No. 1 James, SW NW SW sec. 35-1s-8. Wapanucka 660 ft.; drlg. 2,115 ft.

Continental Oil Co. No. 1 King, NE SW NE sec. 26-1-8. Sd. 790-820 ft.; cored to 824 ft.; oil rose 180 ft. from top.

W. C. Mitchell No. 1 Quiett, NE NW SW sec. 35-1-8. Wapanucka 1,550 ft.; T.D. 1,900 ft.; bailed to 1,700 ft.; no showing.; S.D.

Shell Pet. Corp. No. 3 Hill, SE SE NW sec. 30-3-10. Hunton 5,280 ft.; Sylvan 5,355 ft.; Viola 5,448 ft.; S.O. 5,640-57 sd. 6,275 ft.; T.D. 6,457 ft.; P.B. 4,300 ft.; bridged 4,222 ft.; S.D.

Sinclair Prairie Oil Co. No. 1 Culver, NE NE SW sec. 16-1-8. Drlg. 1,938 ft.

Garfield County

Herndon Drlg. Co. etal No. 1 Branson, SW SW SE sec. 23-24-3w. Drlg. 4,780 ft.

Earl McBride et al No. 1 Gage Est., SE SE NW sec. 27-22-3w. S.D. 1,380 ft.; sand 1,360-80 ft.; water.

W. J. Sherry et al No. 1 Haken, NW NW SW sec. 32-20-10w. Miss. L. 5,860 ft.; Viola 6,800 ft.; first sand 6,940-85 ft.; second sand 7,045-53 ft.; D.&A.

Stanolind O. & G. Co. et al No. 1 Brunken, SW SW NE sec. 32-23-4w. Top Dense 4,915 ft.; Dolomite 5,935 ft.; first Wilcox 5,975 ft.; second Wilcox 6,023 ft.; H.F.W. 6,130-33 ft.; drlg. 6,148 ft.

Garvin County

Charles E. Carter et al No. 1 Wood, NW SW SE sec. 5-4-3. O.W.D.D.; sd. 2,973 ft.; Hunton 3,000 ft.; T.D. 3,018 ft.; bailed 57 bbls. oil, 57 bbls. wtr. in 24 hrs.

C. A. Luttrell et al No. 1 Howell, NW SE NW sec. 34-1-1. Drlg. 70 ft.

McElreath & Suggett No. 1 Lasater, SE SE SW sec. 2-2-1w. Drlg. 4,283 ft.

Grady County

John Graham et al No. 1 Castleberry, SW SE NW sec. 8-5-7w. Drlg. 40 ft.

Art Holt et al No. 1 Ramsey, NE SE NE sec. 31-5-8w. Drk.

Ray Stevens No. 1 Mays, NE cor. sec. 1-3-8w. Drk.

Hughes County

Blackwell O. & G. Co. No. 1 Homahte, SW NE NE sec. 1-9-10. R.U.R.

Blackwell O. & G. Co. No. 1 Long, SE NE NW sec. 29-9-9. Sand 1,215-35 ft.; T.D. 1,700 ft.; to set 10-in. csg.

M. H. Halsey No. 1-A Eustep, NW NW SW sec. 11-8-9. Wapanucka 3,428 ft.; Cromwell 3,452 ft.; T.D. 3,454 ft.; 2 bailers wtr. an hr.; P.B. and shot 3,030-45 ft.; est. 10,000,000 ft. of gas; P.B. to 3,412 ft.; re-shot.

George Orr et al No. 1 Morgan, NE SE SW sec. 6-7-9. Cellar and pits.

Phillips Pet. Co. No. 1 Eberle, NE NE SW sec. 12-5-9. Wapanucka 3,887 ft.; Cromwell 4,368 ft.; Mayes 5,160 ft.; Woodford 5,230 ft.; Hunton 5,432 ft.; Sylvan 5,435 ft.; Viola 5,525 ft.; T.D. 5,540 ft.; drilled plug.; C.O. 5 ft. off bottom; wtr. started to show.

Sinclair Prairie Oil Co. et al No. 1 Wilkly, SW cor. sec. 23-9-8. Calvin 1,505 ft.; S.D. for wtr. 3,025 ft.

Sivalls et al No. 1 Montgomery, NW SW NW sec. 7-9-9. Booch 2,950 ft.; Gilcrease 3,100 ft.; Wapanucka 3,470 ft.; Cromwell 3,497 ft.; T.D. 3,498 ft.; fsg.

Johnston County

Shell Pet. Corp. No. 1 Illinois Bankers Life, NW SE NE sec. 10-2s-7e. Hunton 400 ft.; no show; Sylvan 624 ft.; drlg. 715 ft.

Kay County

W. O. Allen No. 1 Fulton, SE cor. sec. 18-27-4. Reset 10-in. csg. 1,675 ft.

Kiowa County

Hendershot & Wilson No. 1 Parrish, SE SE NW sec. 3-6-15w. T.D. 290 ft.; H.F. W. and C.O.

E. A. De Bolt et al No. 1 Burnett, NW SE NE sec. 30-7-20w. Pits.

Le Flore County

McCraw et al No. 1 Tidwell, C NW SE sec. 17-3-22. Set 10-in. csg. 1,560 ft.; T D. 1,750 ft.; rep. rig.

Lincoln County

Amerada Petroleum Corp. et al No. 1 Zimmerman, SW SW NE sec. 10-12-5. T.D. 4,358 ft.; 285 ft. oil, 200 ft. wtr. in hole; cannot lower fluid.

Mid-Continent Pet. Corp. and Texas Co No. 1 Hillman, SW SE NE sec. 29-13-6. Drlg. 4,065 ft.

Skelly Oil Co. No. 1 Sporn, NW NE SW sec. 21-17-3. Drlg. 1,750 ft.

Logan County

W. N. Anthony and H. G. Marshall No. 1 Fruin-Eckman, SE SE SW sec. 4-16-1. T.D. 5,285 ft.; P.B. 5,181 ft.; swdg. pipe.

McClain County

Arab Pet. Corp. No. 1 Autry, NW cor. sec. 16-7-3w. T.D. 8,775 ft.; D.&A.

McCurtain County

Louis Sikes No. 1 Mitchell, C NW SW sec. 12-9s-26. Spudded and S.D. for 30 days.

McIntosh County

S. E. Dieckman No. 1 K. McIntosh, SE cor. sec. 4-12-17. Drlg. 905 ft.

Noble County

Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Gillham, NE SE SE sec. 14-22-1. Drlg. 2,760 ft.

Oklahoma County

I. D. O'Shaughnessy, Inc. No. 1 Berlowitz, SE SW NE sec. 9-12-3w. Drlg. 5,375 ft.

Osage County

Gray & Folson No. 1 Osage, SW SW NE sec. 33-25-7. Drlg. 2,902 ft.

Stoner Bros. No. 1 Osage, NW NE SW sec. 18-22-8. Drlg. 1,170 ft.

Payne County

Amerada Pet. Corp. and Stanolind O. & G. Co. No. 1 Pratt, SE cor. sec. 29-19-5. Misener 3,657 ft.; 2,000,000 ft. of gas; S.O.; Viola 3,671 ft.; T.D. 3,685 ft.; fsg.

Pittsburg County

Okla. Dist. Oil Co. No. 1 Beeler, NE NE SW sec. 7-7-14. Drlg. 147 ft.

Pontotoc County

Selby O. & G. Co. No. 1 Sands, NE NE NE sec. 20-3-5. T.D. 1,907 ft.; D.&A.

Southard & Miller No. 1 Wilson, NW SE SW sec. 26-4-5. Spudded and S.D.

Pottawatomie County

J. L. Shaw No. 1 Illinois Life, NW SE NW sec. 1-4-5. Drlg. 1,590 ft.

Wofford Bros. No. 1 Sewell, SW SW SE sec. 14-7-3. Rig.

Seminole County

Ark Royalty Co. No. 1 Kiker, SE SE NE sec. 9-10-7. T.D. 3,150 ft.

J. E. Crosbie, Inc., and Blankenship & Quiett No. 1 Biggers, C N½ N½ NE sec. 30-6-8. Gilcrease 2,547 ft.; cored 2,618-21 ft.; gas odor; drlg. 2,708 ft.

Deaner & Tilley et al No. 1 Wilson, SE SW SW sec. 29-7-6. Drlg. 2,435 ft.

Felmlee & Nichaelson No. 1 Belford, SE NW NE sec. 15-9-8. Sd. 1,460-1,505 ft.; S.O.&G.; S.D. 1,680 ft.

H. E. Kennedy No. 1 Bowlegs, NW NW SE sec. 3-8-7. Loc.

Rudco O. & G. Co. No. 1-A Butner, NE NE SW sec. 15-9-8. Drlg. 900 ft.

Tom Phillips & Kinrow Drlg. Co. No. 1 Cheparney, SE SE NW sec. 7-6-7. Drlg. 3,630 ft.

Twin State Oil Co. No. 1 Hamm, SW SE SW sec. 24-10-7. T.D. 3,552 ft.; W.O.C.

Washita County

L. P. McWhirter No. 1 fee, SW cor. sec. 34-8n-19w. T.D. 1,497 ft.; S.D.

SOUTHERN OKLAHOMA

Atoka County

D. Malarnee et al No. 2-A DOK ranch, SE cor. sec. 35-2s-13e. O.W.D.D.; T.D. 3,482 ft.; U.R. 8-in. csg.

Phelps & Coats et al No. 1 Fidelity Life Ins. Co., SE SW NW sec. 23-1s-12. T.D. 750 ft.; S.D. for casing.

Prairie Investment Co. No. 1 A. Cobb, SW NE NW sec. 19-3s-11e. Viola 30 ft.; T.D. 472 ft.; S.D.

Carter County

Carter Oil Co. et al No. 1 Leon Voorhees, C SE SW sec. 34-5s-2w. T.D. 7,040 ft.; testing.

W. E. Hammond No. 1 J. Rile, SW SE SE sec. 8-5s-1e. T.D. 475 ft.; S.D.

Cotton County

English Drlg. Co. No. 1 Wilson, NW NW SE sec. 7-4s-11w. T. D. 1,514 ft.; S.D.

Harmon County

Lloalko Trust, Ltd. No. 1 Crosnoe, SE SE SW sec. 14-3n-25w. T.D. 2,870 ft.; S.D. for D.P.

Jackson County

C. P. Burnham No. 1 Oliver, NW NW SE sec. 26-1-20w. Granite Wash 1,912 ft.; S.O.; T.D. 2,085 ft.; fsg.

W. A. Delaney No. 1 Mock, C NE SW sec. 32-1n-20w. Drlg. 1,450 ft.

A. H. Jackman No. 1 fee, SW SW SW sec. 27-1s-24w. T.D. 2,685 ft.; W.O.C.

J. Ben Russell No. 1 Daniel, NW NE SE sec. 13-3-20w. Drlg. 1,050 ft.

Universal Oil Co. No. 1 R. W. Briscoe NW SW NE sec. 36-1s-20w. T.D. 3,004 ft.

Jefferson County

A. T. Campbell No. 1 Trout, SE NE NE sec. 6-8s-7w. Sd. 1,525-57 ft.; T.D. 2,- 202 ft.; set 6⅝-in. csg.

Pearson et al No. 1 Douthitt, NE cor. sec. 24-6s-9w. T.D. 2,202 ft.; S.D.

Johnston County

Equitable O. & G. Co. No. 1 Bellsey, NE SW sec. 12-2s-4e. Arbuckle L. 1,552 ft.; drlg. 1,938 ft. in L.

Love County

Amerada Pet. Corp. No. 1-A Westheimer & Daube, SW SE SW sec. 27-6s-2e. T.D. 7,363 ft.; P.B. 2,970 ft.; swabbed 26 bbls. in 24 hrs.

W. H. Riddle et al No. 1 Johnson, C SW SE sec. 20-8s-2w. Drk.

J. B. Russell et al No. 1 Scott, SW SE SW sec. 29-8s-2e. T.D. 4,968 ft.; D.&A.

Sinclair Prairie Oil Co. No. 1 Stockton SE SE SW sec. 26-6s-2w. T.D. 8,565 ft.; to set csg. and test.

Marshall County

Helmerich & Payne No. 1 Taliaferro, NW SE SW sec. 26-5s-5e. T.D. 2,750 ft.; P.B. 1,350 ft.; set whipstock.

Sherril & Rounds No. 1 Taylor, SW NE NE sec. 30-7s-7e. Spd.

Pushmataha County

C. W. Whitehead et al No. 1 Misser, SE SW SW sec. 35-3s-18e. T.A.; T.D. 2,-560 ft.

Stephens County

W. G. Endicott et al No. 1 McFatridge, NW NW SW sec. 11-3s-9w. T.D. 1,452 ft.; S.D.

T. H. McCasland No. 1 J. C. Parker, NE NE SW sec. 2-1n-6w. T.D. 2,518 ft.; D.&A.

Ed Parson No. 1 Olson, C SW SW sec. 21-2n-8w. Location.

Tillman County

Rochelle Bernheimer No. 1 Tate, NE NE NW sec. 16-1s-19w. Cg. 1,771 ft.

Gulf Oil Corp. et al No. 1 McWilliams, NW SW SW sec. 15-3s-17w. Drlg. 3,950 ft.

Gulf Oil Corp. No. 1 Wearmouth, SE NW SE sec. 31-1s-18w. Drlg. 4,952 ft.

Johnson, Young & Mitchell No. 1 Donahoe, SW NW NW sec. 7-4s-17w. T.D. 2,640 ft.; S.D.

Shirley, Clum et al No. 1 Moricle, NW NW SE sec. 16-4s-14w. T.D. 1,331 ft.; S.D.

Eugene Skinner No. 1 Rilling, SE SE NW sec. 22-1s-15w. Spudded.

D. S. Smith No. 1-A Hammill, NE NE NW NW sec. 6-5s-15w. T.D. 1,985 ft.; S.D.

ARKANSAS

Bradley County

Phillips Pet. Co. No. 1 C. H. Murphy et al, NW cor. NW NW sec. 12-17-11. Drlg. 3,015 ft.

Calhoun County

Ben G. Barnett No. 1 Freeman Smith, SE cor. sec. 36-15-14. Drlg. 5,328 ft.

T. R. Brown et al No. 1 Calion Lbr. Co., C S½ SE SW sec. 22-15-15. Drlg. 4,480 ft.

Clark County

Boris Triponoff No. 1 W. Gibbons, sec. 27-8-18. T.D. 557 ft.; D.&A.

Cleveland County

R. L. Saxon No. 1 Tipton, SE cor. SW NE sec. 13-11-12. Drk.

Hempstead County

Dixie Drlg. Co. No. 1 Wheatley, 330 ft. S. 30 ft. E. NW cor. SW NE sec. 14-11-26. R.U. and W.O.O.

M. D. Fitzwater No. 2 Lafferty, sec. 17-14-24. S.D. at 2,437 ft.

H. D. Easton et al No. 1 Conway-Tiller, sec. 20-12s-27w. Encountered hd. dense L. 2,834 ft.; abd. at 2,862 ft.

LaFayette County

Erwin & Leach No. 3 Bodcaw Lbr. Co., 330 ft. S and E, NW cor. sec. 20-16-13. T.D. 7,707 ft. Oolitic lime 7,654-98 ft. D.S. test 7,626-98 ft., 24 thribbles a.w. in 12 min. No oil or gas. W.O. P.B. to 3,600 ft.; perf. csg. 3,525-50 ft.; tested upper formations; S.W. only; D.&A.

Earl F. Fox No. 2 Coleman Bros., sec. 30-16-24. T.D. 3,760 ft.; D.&A.

A. M. Neeley No. 1 Meek, 330 ft. S and W, NE cor. NE NW sec. 35-19-25. R.U.

Little River County

Roberts et al No. 1 Hall, sec. 22-13-29. O.W.D.D.; S.D. at 2,050 ft.

Loanoke County

Frank F. Silver et al No. 1 Joe Chambers, C NE sec. 17-2n-7w. T.D. 1,470 ft. S.D.

Miller County

Deep Rock Oil Corp. No. 1 Williams, NW cor. SW NW sec. 6-16-25. T.D. 4,156 ft.; D.S. stuck.

King Oil Corp. No. 1 G. W. Crank, SW NE sec. 19-26-25. T.A. 3,906 ft.

King Oil Corp. No. 1 Mann, NW cor. NW SE sec. 2-16-26. Drlg. 2,386 ft.

McClanahan et al No. 1 Miller Ld. & Lbr. Co., SW cor. sec. 2-18s-28w. Drk.

Odell Hinson No. 1 Montana Realty Co., 330 ft. S and W NE NW NW sec. 3-17-28. Drlg. 1,750 ft.

Ouachita County

Armstrong-Rhoda No. 1 M. Bragg, SE cor. SE NW sec. 25-13-18. T.D. 1,402 ft.; D.&A.

Carnes & Harrell No. 1 Dunn & Robinson, new loc., 440 ft. S, 440 ft. E, NW cor. NW SE sec. 7-12-19. T.D. 2,415 ft. cor. depth; S.D.; W.O.

J. E. Crosbie No. 16 Sewell, C W½ SW NE sec. 36-15-15. Drk.

J. M. Farriss No. 1 Dean, NE SE NW sec. 16-15-17. Old T.D. 2,907 ft.; prep. to D.D.

Lion Oil Ref. Co. No. 1 Reynolds, C E½ SE NE sec. 28-15-15. Cg. good saturation 4,871-91 ft.; rmg. and cg. ahead.

L. L. McDonald No. 1 Langley, 330 ft. N and E, SW cor. NE SW sec. 19-15-15. S.D. 2,116 ft.

Phillips Pet. Co. No. 1 Arnold, 660 ft. S and 330 ft. E, NW cor. NE sec. 27-15-15. D.S.T. 20,000,000 ft. gas and 70 ft. mud; testing 4,921 ft.

Phillips Pet. Co. No. 1 Cheatham, 660 ft. N and 330 ft. E, SW cor. NE sec. 27-15-15. T.D. 4,910 ft.; prep. to core and test.

Phillips Pet. Co. No. 1 J. M. Farriss, cen. W½ NW SE sec. 27-15-15. R.U. and S.D.

Phillips No 1 E. Gette, 660 ft. N and 330 ft. E, SW cor. NE sec. 27-15-15. Drlg. 4,515 ft.

Phillips Pet. Co. No. 1 L. Harriss, 660 ft. N and 330 ft. W, SE cor. SW NE sec. 28-15-15. T.D. 4,807 ft.; cg. and tstg.

John Pugh No. 1-A P. T. Hildebrand, 660 ft. N and 330 ft. W, SE cor. sec. 28-15-15. T.D. 4,914 ft.; swbd. dry; 100 bbls. S.W.; 50 bbls. oil; W.O.

Standard Oil Co. of La. No. 3-B Reynolds, 660 ft. N and 330 ft. W, SE cor. NW SW sec. 27-15-15. Comp.; flw. 82 bbls. oil in 24 hrs.; 4,000,000 ft. gas; 11/64-in. ck.; T.D. 4,912 ft.

O. F. Whittaker, Tr., No. 1 S. Howard, 600 ft. E and 150 ft. N, SW cor. NW NE sec. 20-12-16. Drlg. 2,503 ft.

Union County

Ark.-Southern Oil Co. No. 1 M. H. Simmons, NW cor. NW NE sec. 15-18-13. Drk.

J. C. Buckbee No. 2 Ezzell, SW cor. NE NW sec. 13-17-15. Cg. 4,971-89 ft.; cg. ahead.

J. E. Crosbie, Inc., No. 6 Sullivant, 560 ft. E, 800 ft. N, SW SE NW sec. 12-17-14. Drlg. 3,181 ft.; cmt. 7-in. 3,177 ft.; W.O.C.S.

Kinnebrow & Simpson No. 1 L. Adams, SW cor. NE NE sec. 12-17-14. T.D. 3,172 ft.; S.W. only; abd.

Marine Oil Co. No. 1 Simmons, 250 ft. S and W, NE cor. SE NW sec. 10-18-13. Drk.

McCresslen Oil Co. No. 2 D. Norman, NE cor. NE SE sec. 3-18-13. W.O. jack to pump, 3,556 ft.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo-Rodessa

American Lib. O. Co. No. 1 Norton, 330 ft. S and 330 ft. W, NE cor. sec. 17-23-15. Cg. 6,004 ft.

Ark.-La. Gas Co. No. 13 Rodessa O. & L. Co., 2,330 ft. N and 1,136 ft. W. SE cor. sec. 22-23-16. Comp. flowing 22 B.P.H., ½-in. tbg. ck.; T.D. 5,996 ft.

Ark.-La. Gas Co. No. 18 Rodessa O. & L. Co., NW cor. sec. 23-23-16. T.D. 5,994 ft.; acidized.

Ark.-La. Gas Co. No. 19 Rodessa O. & L. Co., NE cor. NE SE sec. 22-23-16. Drlg. 5,847 ft.

Ark.-La. Gas Co. No. 20 Rodessa O. & L. Co., NW cor. SW sec. 23-23-16. Drlg. 5,022 ft.

Ark.-La. Gas Co. No. 21 Rodessa O. & Ld. Co., 296 ft. N, 330 ft. E SW cor. sec. 23-23-16. Drlg. 1,805 ft.

Ark.-La. Gas Co. No. 22 Rodessa O. & Ld. Co., 330 ft. S and 328 ft. W, NE SE NE sec. 23-23-16. R.U.

Ark.-La. Gas Co. No. 23 Rodessa O. & Ld. Co., 330 ft. N and E, SW cor. NW NE sec. 23-23-16. Loc.

Blackwell O. & G. No. 2 Neugent, 330 ft. S and 330 ft. E NW cor. NE SE sec. 8-23-15. Cg. 5,800 ft.

S. P. Borden No. 2 K.C.S., NW cor. SW sec. 23-23-16. Drlg. 5,440 ft.

Canadian Oil Co. No. 1 Comegys, SE cor. sec. 10-23-16. T.D. 6,022 ft.; swbg.

Haynes Prod. Co. No. 7 Otwell, 330 ft. N and E, SW SE SE sec. 15-23-16. Drlg. 3,720 ft.

Haynes Prod. Co. No. 8 Otwell, 400 ft. S and 280 ft. E, NW SE SE sec. 15-23-16. Drlg. 3,984 ft.

J. Edw. Jones No. 1 Rockefellow, cen. Lot 3, Blk. 21, sec. 23-23-16. Drk.

Lacey et al No. 2 Tyson, 487 ft. S. 789 ft. W, NE SE NW sec. 24-23-16. Drlg. 3,735 ft.

R. W. Norton No. 3 Atkins Unit, 175 ft. S. 1,286 ft. W, NE cor. sec. 18-23-16. Comp. 6,029 ft.; flowing 27 B.P.H., ½-in tb. ck.; T.B. 6,042 ft.

R. W. Norton No. 4 Atkins Unit, 820 ft. N and 441 ft. E, SW SE sec. 7-23-15. Drk.

R. W. Norton No. 5 Atkins Unit, 660 ft. S and E, NW NW NE sec. 18-23-15. Drk.

R. W. Norton No. 2 Elder, 330 ft. S and W, NE cor. sec. 23-23-16. Comp. flowing 16 B.P.H., 1/16-in. tbg. ck.; T.D. 6,-064 ft.

R. W. Norton No. 3 Foscue Unit, NE cor. sec. 29-23-16. Comp. flowing 21 B.P.H., 3/16-in. tbg. ck.; T.D. 6,010 ft.

R. W. Norton No. 4 Foscue Unit, SE cor. sec. 20-23-16. Cutting out stuck D.S.; T.D. 5,938 ft.

R. W. Norton No. 6 Foscue Unit, 656 ft. N and W, SE cor. of Foscue tract, sec. 20-23-16. Drk.

R. W. Norton No. 5-A Caddo Lv. Bd., 2,-600 ft. N and 600 ft. W, C sec. 28-23-16. Drlg. 4,918 ft.

R. W. Norton No. 6-A Caddo Lv. Bd., 2,-600 ft. N and 660 ft. W, C sec. 28-23-16. Comp. flowing 9 B.P.H., 1/16-in. tbg. ck.; T.D. 5,892 ft.

R. W. Norton No. 7-A Caddo Levee Board, 330 ft. S, 1,980 ft. W, NE cor. sec. 28-23-16. Loc.

R. W. Norton No. 2 Slattery, 1,980 ft. S, 656 ft. E, NW cor. sec. 28-23-16. Loc.

R. W. Norton No. 2 N. S. Spearman, 330 ft. S and 660 ft. E, NW cor. SW sec. 18-23-15. 6-in. cmtd. 6,016 ft.; T.D. 6,028 ft.; W.O.C.S.

R. W. Norton No. 5 Tyson heirs, 1,155 ft. N, 165 ft. W, SE cor. NW¼ sec. 13-23-16. T.D. 3,135 ft.; rng. 9-in.

Phillips No. 3 Adams, 815 ft. S and 1,707 ft. E, NW cor. sec. 17-23-16. Drlg. 4,275 ft.

Phillips Pet. Co. No. 5 Norton Est., SW cor. NW sec. 17-23-15. T.D. 6,070 ft.; 7-in. cmtd. 6,038 ft.; W.O.C.S.

Phillips No. 6 Norton Est., 1,664 ft. E and 1,794 ft. S, NW cor. sec. 17-23-15. Drlg. 4,713 ft.

Phillips Pet. Co. No. 1 Robinson, C E½ NE SE sec. 18-23-15. Drlg. 5,421 ft.

Phillips No. 1 J. T. Smith, 330 ft. S and 330 ft. W NE cor. SW SE sec. 8-23-15. Drlg. 4,705 ft.

Regent Oil Corp. No. 1 Tyson, 104 ft. S, 104 ft. E NW cor. SE SW sec. 24-23-16. Drlg. 5,890 ft.

Reinke et al No. 1 Fitts, 363 ft. S, 1,308 ft. E, NW cor. SW NW sec. 23-23-16. Loc.

H. W. Snowden No. 1 Phillips, C Lot 11, Blk. 36, sec. 23-23-16. Cg. 5,971 ft.

Snowden No. 2 Phillips, cen. Lot 1, Blk. 47, Townsite, sec. 23-23-16. Loc.

H. W. Snowden No. 3 Phillips, C Lot 7, Blk. 47, Townsite, sec. 23-23-16. Drlg. 4,550 ft.

Snowden & Anding No 1 Taylor, C Lot 7, Blk. 46, Townsite, sec. 23-23-16. Drlg. 1,983 ft.

Standard Oil Co. of La. No. 5 J. Caldwell, 330 ft. S and W, NE cor. SW SE sec. 12-23-16. 9-in. cmtd. 2,087 ft.; W.O.C.S.

Standard No. 16 Lawton, NE cor. SW NW sec. 14-23-16. Comp. flowing 111 B.P.H., 1¾-in. tbg. ck.; T.D. 6,024 ft.

Standard No. 17 Lawton, 100 ft. N and 764 ft. W, SE cor. NW sec. 14-23-16. Drlg. 5,616 ft.

Standard No. 4-A M. L. Pitts, 330 ft. N and W, SE sec. 11-23-16. T.D. 6,022 ft.; swabbed in and flowed 2 hrs.; went dead; will raise tbg.

Simplex Oil Co. No. 3 Natalie, 1,175 ft. N and 200 ft. W SE cor. W½ SE¼, sec. 10-20-15. T.D. 2,205 ft.; tested S.W.; P.B. to 2,199 ft.; W.O.

Tri-State O. & G. Co. No. 1 Hall, C Lot 12, Blk. 29, sec. 23-23-16. T.D. 6,004 ft.; acidized 3,000 gals.

Tri-State O. & G. Co. No. 1 F. L. Westbrook, C Lot 6, Blk. 12, sec. 23-23-16. Comp. flowing 5 B.P.H., one-eighth inch tbg. ck.; 3,000 gals. acid; T.D. 6,027 ft.

United No. 6 Brewer Unit, 1,094 ft. N and 569 ft. E, SW cor. sec. 23-23-16. Drlg. 5,955 ft.

United No. 3 Harris, NE cor. sec. 15-23-16. T.D. 6,017 ft.; testing.

United Gas No. 2 Lindsay Mallound Unit, 133 ft. S and W NE NW NW sec. 24-23-16. T.D. 2,100 ft.; 9-in. cmtd.; W.O.C.S.

United No. 4 Miller, sec. 14-23-16. T.D. 6,017 ft.; 2,000 gals. acid; tested S.W.; P.B. to 5,950 ft.; testing.

United No. 2 Mitchell, SW cor. of lse., sec. 20-23-16. T.D. 6,010 ft.; rng. 5-in.

United No. 5 M. L. Pitts, 312 ft. N and 658 ft. W, SE cor. NW SE sec. 13-23-16. Csg. seat gave way; cmtd. blk. 5,990 ft.; T.D. 6,040 ft.; comp.; flw. 16 bbls. per hr. through ¼-in. ck.; 1,500 gals. acid, T.P. 600 lbs.; C.P. 300 lbs.

United No. 8 Pitts, SW cor. of E 22 ac., NE SW sec. 15-23-16. T.D. 6,085 ft.; 7-in. cmtd. 6,024 ft.; W.O.C.S.

United Gas No. 9 M. L. Pitts Unit, 113 ft. N, 111 ft. W, SE SW SW sec. 13-23-16. Drlg. 4,594 ft.

United Gas No. 4 N. S. Spearman Unit, 659 ft. S, 650 ft. W, NE NW sec. 18-23-15. Drlg. 4,594 ft.

United Gas No. 1 Teamer, 133 ft. S, 111 ft. E, NW NE NW sec. 24-23-16. Drlg. 2,575 ft.

United Gas No. 6 Thomas Unit, 319 ft. N, 329 ft. E, SW NE NW sec. 23-23-16. Drlg. 5,703 ft.

United Gas No. 8 Thomas Unit, 70 ft. SE and 148 ft. NW at right angle to NE cor. Lot. 1, Blk. 7, sec. 23-23-16. T.D. 2,200 ft.; set 9-in.; W.O.C.S.

United Gas No. 23 Rodessa O. & L. Co., 319 ft. N, 423 ft. W, SE NW NW sec. 23-23-16. Drlg. 5,032 ft.

United Gas Pub. Ser. Co. No. 2 U. S. Govt., 660 ft. S and 1,166 ft. E, NW cor. of 54-ac., sec. 29-23-16. T.D. 6,015 ft.; 7-in. cmtd. 5,993 ft.

United Gas No. 574-1 fee, 660 ft. N and W, SE cor. sec. 16-23-16. Drlg. 3,350 ft.

Grady Vaughn No. 2 Hunter-Derryberry, sec. 14-23-16. Comp. flowing 20 B.P.H., 3,000 gals. acid, ½-in. tbg. ck.; P.B. from 6,024 to 6,014 ft.

United Gas No. 3 Young, 612 ft. N, 655 ft. W, SE cor. sec. 21-23-16. Loc.

Sabine Parish—Zwolle

Ellis Prod. Co. No. 1 Williams, 330 ft. S and W, NE cor. SE NE sec. 23-7-11 Tested dry; S.D.; W.O. 2,806 ft.

N. LOUISIANA WILDCATS

Bienville Parish

J. W. Leonard No. 1 Courtney, 330 ft. N and W, SE cor. sec. 5-17-7w. R.U.

Rondeau et al No 1 Locke, 150 ft. S and 1,495 ft. W, NE cor. sec. 9-15-10. Drlg.

A. C. Walters No. 1 D. B. Davis, C SE SW sec. 3-16-9w. Drlg.

Bossier Parish

Geo. H. Bringhurst et al No. 2 Buckley, 1,000 ft. N, 330 ft. W, SE cor. sec. 35-21-13. T.D. 300 ft.; S.D. for wtr.

Bossier O. & G. Co. No. 3 Sherrill, sec. 13-19-12. T.D. 2,226 ft.; junked and abd.

Producers O. & G. Co. No. 1 Webb, C W½ SW sec. 22-17-12. T.D. 3,772 ft.; repairs; S.D.

Tidwell et al No. 1 Nattin, 200 ft. S and W, C sec. 15-22-14. Drlg. 2,057 ft.

Triangle Drlg. Co. No. 1-E Skannal, 660 ft. N and 2,640 ft. W, SE cor. sec. 23-17-12. Drlg. 3,769 ft.

United Gas Pub. Ser. Co. No. 1-D H. L. Skannal, 660 ft. S, 561 ft. W, NE cor. SE sec. 22-17-12. Drlg. 5,045 ft.

Caddo Parish

Calatex O. & G. Co. No. 2 Scott, 1,038 ft. W, 807 ft. N, SE cor. sec. 5-16-16. T.D. 2,979 ft.; T.D. 2,979 ft.; testing.

Calatex O. & G. Co. No. 2 Hudson, 1,319 ft. N and 913 ft. E, SW cor. sec. 5-16-16. Drk.

Calatex O. & G. Co. No. 1 Whitworth, 700 ft. S and 860 ft. E, NW cor. SW¼ sec. 10-16-16. T.D. 50 ft.

R. E. Dalton No. 1 Noel Est., SW cor. SE SE sec. 4-21-14. Drlg. 865 ft.

Hillman et al No. 2 Noel Est., 530 ft. S and 330 ft. W, NE cor. sec. 12-20-16. Cg. 2,190 ft.

J. B. Hutchinson No. 2 Storey-Phillips, SW cor. NE NW sec. 28-16-13. Drk.

Bill Morefield et al No. 1 Stokely, 745 ft. S and 100 ft. E, C sec. 5-20-16. R.U.

Morris & Wooley No. 1 Pender, NW cor. SW sec. 11-20-15. T.D. 2,207 ft.; testing.

Persian Oil Co. No. 1 J. E. Cupples, 500 ft. S and 350 ft. W, NE cor. sec. 24-16-13. Drk.

Prairie River Synd. No. 1 Hutchinson, 330 ft. N and E, SW NW sec. 15-15-12. Set 16-in. 175 ft.; drlg. 1,050 ft.

Sport Oil Corp. No. 1-D Muslow, SE cor. sec. 5-20-15. T.D. 3,920 ft.; S.D. rig repairs.

Stanolind O. & G. Co. No. 102 Dillon, 330 ft. S and W NE cor. sec. 14-21-15. T.D. 1,699 ft.; will acidize.

Stanolind O. & G. Co. No. 103 Dillon hrs., sec. 13-21-15. Set 10-in. 102 ft.; W.O.C.S.

United Gas No. 1-A S. R. Wheeler, 1,320 ft. S, 1,500 ft. W, NE cor. sec. 16-18-16. Drlg. out cmt. to old T.D.

Caldwell Parish

Critchett & Woods No. 1 Kyles, NE cor. SW NE sec. 18-11-3e. P.B. to 1,300 ft.; old T.D. 1,740 ft.; W.O.O.

Critchett & Woods No. 2 La. Cen. Lbr. Co., NW cor. NW SE sec. 18-11-3e. T.D. 1,395 ft.; S.D.

Zeigen No. 6 La. Cen. Lbr. Co., sec. 13-14-3e. T.D. 1,789 ft.; D.&A.

Ziegen No. 7 La. Cen. Lbr. Co., sec. 10-12-2e. Set 12-in. 82 ft.; W.O.C.S.

Catahoula Parish

J. Ray McDermott No. 1 La. Cen. Lbr. Co., 400 ft. S and E, NW cor. sec. 15-10-5e. T.D. 2,505 ft.; S.D. rig repairs.

Claiborne Parish

S. E. Langford et al No. 1 White, cen. S½ NE SW sec. 26-21-8. R.U.

E. T. Oakes No. 1 H. W. Patton, NE cor. sec. 1-20-5. Drlg. Anhy. 4,300 ft.

United Gas Public Service Co. No. 2 Durfett, 660 ft. N and 1,980 ft. E. SW cor. sec. 31-20-5. Cored sd. 7,710-20 ft.; cg. and drlg. ahead.

Concordia Parish

Zeni Oil Co. No. 1 Young, 1,200 ft. W, 100 ft. N, SE cor. sec. 28-6n-8e. S.D. 1,120 ft.

De Soto Parish

J. E. Carlson No. 1 A. P. Garland, 250 ft. S and E, NW cor. SW sec. 7-14-14. 12-in. cmtd. 100 ft.; W.O.C.S.

J. G. Carson No. 1 C. J. McMichael, sec. 26-13-15. Drk.

L. S. Fite et al No. 1 Ramsey, 330 ft. N and W, C sec. 36-11-11. S.D. for water; T.D. 965 ft.

R. C. Payne No. 1 Harris, sec. 11-13-14. Hole clean; prep. to drlg. ahead.

E. A. Stiller No. 1 Jenkins, 400 ft. S and 200 ft. W, NE cor. NW NE sec. 35-13-12. Comp.; pumped 15 B.P.D.; T.D. 2,490 ft.

Grant Parish

Acadian Prod. Corp. No. 3 Swope, 150 ft. S and E, NW cor SE SE sec. 18-9-1e. T.D. 1,581 ft.; set perf. 6-in.; comp.; pumped 20 bbls. per day.

Acadian Prod. Corp. B-2 Swope, 330 ft. S of No. 7, sec. 18-9-1e. R.U.

Alexander et al No. 1 Maxwell, sec. 9-9-1e. W.O.S.R. 1,538 ft.

Fred W. Henslee No. 2 Uranig, sec. 7-10-1e. Comp. pump 10 B.P.D. T.D. 1,519 ft.

Al Johnson et al No. 1 Brewster, 150 ft. S and W NE NW NE sec 19-9-1e. R.U.

Perry et al No. 1 Barrett, 150 ft. N and W SE NE SE sec. 17-9-1e. S.D. for water; T.D. 1,396 ft.

W. B. Rhineck, Tr., No. 1 Swope, SW cor. NW SW sec. 16-9-1e. T.D. 1,601. Drlg. plug screen stuck. W.O.

Taw Oil Co. No. 1 Bradford, NE cor. NW sec. 16-9-1e. Set 10-in. 60 ft.; S.D.

Tri-State Leg. & Dev. Co. No. 1 Ethridge, 600 ft. S and 300 ft. W, NE cor. sec. 19-7-3w. T.D. 3,012 ft.; D.&A.

Jackson Parish

G. W. Zeigen No. 5 La. Cen. Lbr. Co., sec. 13-14-2w. T.D. 1,770 ft.; O.W.D.D.; R.U.

La Salle Parish

Montague Oil Co. No. 7-A Zenonia Lbr. Co., NE cor. sec. 10-9-1e. Tstd. S.W. and W.O. 1,520 ft.

Lincoln Parish

Caldwell Land & Timber Co. No. 1 J. K. Hammons, 330 ft. S and E, NW cor. SE SW sec. 30-18-1w. S.D. 665 ft.

Herman L. Brown et al No. 1 S. Gardner, 230 ft. N. 380 ft. E. SW cor. NW NE sec. 10-17-4w. D.S.T. 6,507-76 ft.; 125 jts. in 12 mins., est. 70,000,000 ft. gas; 7-in. cmtd. 6,451 ft.; W.O.C.S.

Morehouse Parish

J. B. Collins et al No. 1 E. M. Clarke, SE NE sec. 10-20-7e. R.U.

John E. Farrell No. 22 State, 1,646 ft. S and 346 ft. E, NW cor. sec. 32-22-4e. R.U.

John E. Farrell No. 23 State, 1,341 ft. N and 3,547 ft. E, NW cor. sec. 29-22-4e. R.U.

John E. Farrell No. 24 State, 1,493 ft. S and 2,453 ft. E, NW cor. sec. 29-22-4e. R.U.

United Gas Pub. Ser. Co. No. 25 Tensas, 1,418 ft. W and 1,242 ft. S, NE cor. sec. 29-22-4e. Comp.; T.D. 2,169 ft.; 3,000,000 ft. gas; 1,020 lbs. rock pressure.

United Gas No. 28 Tensas, sec. 3-21-4e. Set 10-in. 170 ft.; W.O.C.S.

United Gas No. 29 Tensas, sec. 17-22-4e. Set 10-in. 170 ft.; W.O.C.S.

United No. 17 Tensas, 1,320 ft. N and 1,317 ft. W, SE cor. sec. 26-22-4e. Drlg. 2,231 ft.

United No. 18 Tensas, 1,320 ft. S and 1,317 ft. W NE cor. sec. 35-22-4e. Drk.

United No. 27 Tensas, 1,288 ft. N and 660 ft. W, SE cor. sec. 4-21-3e. Cmt. 6-in. 2,083 ft.; W.O.C.S.

United Gas No. 30 Tensas, 1,313 ft. W, 664 ft. S, NE C sec. 3-21-4e. Derrick.

Natchitoches Parish

C. D. Morrison No. 1 Moffitt, 250 ft. N, 250 ft. W, SE cor. sec. 19-10-10. 10-in. set 110 ft.; W.O.C.S.

Ouachita Parish

J. E. Ferrell No. 6 State, 2,087 ft. N, 242 ft. W, SE cor. sec. 35-20-3e. Loc.

Innerstate Nat'l Gas Co. No. 49 fee, 2,987 ft. W, 210 ft. N, NE cor. sec. 45-19-3e. Loc.

Red River Parish

Byrd Explo. Co. No. 1 Edge, NE¼, SE¼, sec. 29-13-11. T.D. 2,499 ft.; S.D.

Byrd Explo. Co. No. 1 Waller, 1,570 ft. N and 1,520 ft. W, SE cor. sec. 20-12-11. T.D. 2,456 ft.; cmt. 6-in. 2,423 ft.; W.O.C.S.

W. J. Hunter et al No. 1 Long Bell Lbr. Co., NE NE sec. 19-13-9. T.D. 3,200 ft.; S.W. 2,876-80 ft.; S.D.

T. G. Shaw No. 1 Teekell, SE cor. SE SW sec. 34-13-10. Ran 2-in. tbg.; made hds. oil and S.W.; W.O.

Richland Parish

J. S. Morrisey No. 1 Jones, 1,293 ft. N, 636 ft. E, SW cor. sec. 15-18-7e. D.S.T. 2,025-2,219 ft.; unsuccessful; will retest; T.D. 2,830 ft.

Arthur Wray No. 1 Slocum, 2,436 ft. S, 560 ft. W, NE cor. sec. 10-17-6e. S.D. 2,540 ft., sh.

Sabine Parish

I. J. Allen No. 1 Paul, sec. 24-9-14. R.U. and S.D.

Circle W. Oil Co. No. 1 Cassell, 660 ft. E and 418 ft. S, C sec. 30-9-13. T.D. 2,216 ft.; pmpd. 40 B.P.D.; comp.

M. C. Forsman No. 1 Patrick, NE SW sec. 21-9-13. Rng. 4-in. csg.

F. G. Cox No. 1 Whitney Corp., C NW NE sec. 8-9-13. T.D. 3,550 ft.; recmt. 9-in.

Pearl Oil Co. No. 6 Crawford, C SE SE sec. 20-9-13. Cmt. 6-in. 3,068 ft.; tstg.; T.D. 3,472 ft.

J. R. Keen No. 1 Long Bell, 276 ft. N and 288 ft. W, SE cor. NE SW sec. 4-22-36. S.D. to repair rig; T.D. 1,858 ft.

O. S. McKnelly No. 3 Henderson, sec. 29-9-13. 10-in. cmtd. 90 ft.; drlg. 900 ft.

A. C. Scott No. 1 Bowman Hicks, 660 ft. S and 330 ft. E, NW cor. NW SW sec. 23-9-13. Acidized; tstg.

Claude H. Smith No. 1 Whitney Corp., 330 ft. S, 990 ft. W, NE cor. sec. 19-10-13. S.D. 3,150 ft.

A. H. Tarver No. 2 Baker, NW cor. NE sec. 36-8-12. Skidded rig 100 ft. south; 13-in. set 210 ft.; drlg. 440 ft.

Tensas Parish

H. M. Jones et al No. 1 Chicago Mill & Lbr. Co., NE cor. sec. 30-12-10e. T.D. 780 ft.; cmtd. 8-in. 766 ft.

H. M. Jones et al No. 1 fee, SE SE 32-12-10e. Drlg. 50 ft.

Union Parish

Boucher & Pace No. 1 Frost-Johnson, NE NE sec. 27-21-1e. T.D. 4,515 ft.; S.D.; negotiating to D.D.

Federal Pet. Co. No. 1 fee, 330 ft. S and W, NE cor. sec. 34-21-3e. R.U.

Federal Pet. Co. No. 2 fee, 330 ft. S and W, NE cor. sec. 5-19-3e. Drk.

Innerstate Natural Gas Co. No. 47 fee, 2,075 ft. S, 660 ft. W, NE cor. sec. 22-20-3e. Cmt. 6-in. 2,092 ft.; W.O.C.S.

Southern Carbon Co. No. 10 Grayling, 1,261 ft. N and 660 ft. E, SW cor. sec. 9-21-4e. Drlg. 1,700 ft.

United Carbon Co. No. 4 Stovall, 1,698 ft. E and 2,201 ft. N, SW cor. sec. 33-21-4e. Cmtd. 6-in. 2,131 ft.; W.O.C.S.

Webster Parish

J. H. Edwards No. 1 Hooper, 330 ft. S and E, NW cor. SW sec. 8-17-9. T.A. 3,016 ft.; S.D.

J. P. Evans No. 1 Johnson, 501 ft. N, 200 ft. E, SW cor. NW SW sec. 36-18-9. R.U.

Red Hawk Oil Co. No. 1 Mayfield, sec. 9-23-9. 10-in. set 90 ft.; W.O.C.S.

Ohio Oil Co. No. 1 R. L. Holloway, 660 ft. S, 760 ft. W, C sec. 23-21-10. T.D. 3,369 ft.; W.O.C.

L. R. Skidmore No. 1 Barnett, sec. 29-17-9. Set 12-in. 65 ft. W.O.C.S.

SOUTH LOUISIANA FIELDS

Bay St. Elaine—Terrebonne Parish

Texas Co. No. 12 State-Bay St. Elaine, sec. 20-22s-18e. Drlg. sd. 5,607 ft.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 34 Watkins, sec. 7-12s-12w. Drlg. sh. and L. 3,575 ft.

Caillou Island—Terrebonne Parish

Texas Co. No. 36 State. T.D. 6,117 ft.; P.B. 2,508 ft.; sdtk. at 2,526 ft.; T.D. 4,205 ft.; I.P. 1,770 B.P.D.; ¼-in. ck.

Texas Co. No. 42 State, sec. 47-23s-20e. T.D. 4,116 ft.; 7⅝-in. csg. 4,072 ft.; I.P. 1,134 B.P.D. through ⅝-in. ck.

Cameron Meadows—Cameron Parish

Burton Sutton Oil Co. No. 12 School Land sec. 16-14s-13w. T.D. 6,094 ft.; P.B. 4,819 ft.; tested gas with oil spray; T.P. 1,750 lbs.; C.P. 1,225 lbs.

Burton Sutton No. 14 School Land, sec. 16-14s-13w. Drk.

Burton-Sutton No. 3-A School Land, sec. 16-14s-13w. T.D. 3,951 ft.; P.B. and sdtkd. at 3,808 ft.; T.D. 4,060 ft.; 7-in. csg. 4,039 ft.

Humble-Magnolia No. 17 Cameron Meadows, sec. 21-14s-13w. Drlg. sd. 4,308 ft.

Darrow—Ascension Parish

Humble O. & R. Co. No. 4 Community, sec. 33-10s-2e. Drk.

Humble O. & R. Co. No. 7 Gumble. Cg. sh. and L. 5,639 ft.

Fausse Point—Iberia Parish

Texas Co. No. 2 State, sec. 35-11s-8e. Drlg. sh. 3,139 ft.

Dog Lake—Terrebonne Parish

Texas Co. No. 3 State, sec. 5-22s-16e. T.D. 7,613 ft.; P.B. and sdtkd. at 5,010 ft.; drlg. sh. 7,005 ft.

Garden Island—Plaquemines

Texas Co. No. 19 Garden Isle, sec. 37-23s-33e. T.D. 4,869 ft.; rmg. 4,151 ft.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 1 Henry Powers, sec. 14-9s-8w. Drlg. sh. 6,880 ft.

Texas Co. No. 10 Nickerson fee, sec. 12-9s-8w. Drlg. sh. 2,710 ft.

Union Sulphur Co. No. 7 Barbe, sec. 11-9s-8w. T.D. 6,749 ft.; 7-in. csg. 6,732 ft.

Union Sulphur Co. No. 1 G. S. Cole, sec. 12-9s-8w. T.D. 5,283 ft.; T.A.

Union Sulphur Co. No. 1 Green Acres, sec. 11-9s-8w. T.D. 7,659 ft.; P.B. 5,045 ft.; W.O.C.

Union Sulphur Co. No. 1 Kaufman, sec. 13-9s-8w. Drk.

Union Sulphur Co. No. 13 State, sec. 12-9s-8w. Drk.

Union Sulphur Co. No. 15 State, sec. 13-9s-8w. Drk.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 21 Irwin, sec. 12-12s-10w. Rig.

Pure Oil Co. No. 1 "A" Duhon, sec. 29-12s-10w. Drlg. clay 239 ft.

Stanolind O. & G. Co. No. 16-A School Ld., sec. 16-12s-12w. Top salt 5,378 ft.; P.B. 2,200 ft.

Stanolind O. & G. Co. No. 23-B Gulf Land, sec. 14-12s-10w. Drlg. sh. 2,427 ft.

Sutton Oil Co. No. 5 Duhon, sec. 22-21s-10w. T.D. 3,272 ft.; 7-in. csg. 3,250 ft.

Texas Co. No. 21 State, sec. 12-12s-10w. Drk.

Texas Co. No. 19-B State, sec. 13-12s-9w. Drlg. sh. 5,227 ft.

Jeanette—St. Mary Parish

Herton Oil Co. No. 3 Banta, sec. 40-13s-9e. Abd.; T.D. 9,005 ft.

Herton Oil Co. No. 1 Barrileau, sec. 59-13s-8e. Drlg. sh. 6,135 ft.

Bayou Mallet—Acadia Parish

Superior Oil Prod. Co. No. 1 Goss, sec. 13-7s-1e. Drlg. sh. 7,059 ft.

Jennings—Acadia Parish

Stanolind O. & G. Co. No. 16 Houssiere-Latrielle, sec. 47-9s-3w. T.D. 7,052 ft.; P.B. 6,200 ft.; W.O.C.

Lafitte—Jefferson Parish

Texas Co. No. 4 Lafitte, sec. 20-17s-24e. T.D. 9,420 ft.; 7⅝-in. csg. at 9,360 ft.; I.P. 1,800 B.P.D.; ⅜-in. ck.; T.P. 1,480 lbs.

Texas Co. No. 5 Lafitte, sec. 20-17s-24e. Drk.

Texas Co. No. 4 Rigolettes Fur Co., sec. 29-17s-24e. T.D. 9,406 ft.; 7⅝-in. csg. 9,360 ft.

Texas Co. No. 5 Rigolettes, sec. 29-17s-24e. Drk.

Lake Barre—Terrebonne Parish

Texas Co. No. 37 Lake Barre State. Drlg. sh. 7,312 ft.

Texas Co. No. 38 State, sec. 38-21s-19e. Drlg. sh. 2,516 ft.

Lake Pelto—Terrebonne Parish

Texas Co. No. 15 State, sec. 17-23s-18e. Drlg. sh. 7,412 ft.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 5 LaFourche Basin Levee Bd., sec. 11-18s-25e. T.D. 5,100 ft.; P.B. 3,450 ft.; drlg. sh. 4,177 ft.

Leesville—LaFourche Parish

Delta Oil Co. No. 1 Constantine, sec. 34-21s-22e. T.D. 5,043 ft.; 7-in. csg. at 5,009 ft.; S.D.

Lincoln Oil Co. No. 2 Constantine, sec. 27-21s-22e. Drlg. sh. 3,687 ft.

Lincoln Oil Co. No. 9 State, sec. 34-21s-2e. 10¾-in. csg. at 769 ft.; drlg. plug.

Texas Co. No. 48 Leesville, sec. 27-21s-32e. Drlg. sh. 2,137 ft.
Texas Co. No. 53 L.L.&E., sec. 34-21s-22e. Drlg. wtr. sd. 5,159 ft.

New Iberia—Iberia Parish

Canal Oil Co. No. 3 Sabetier, sec. 54-12s-7e. S.D. salt 3,180 ft.
Fotadies No. 2 Gulf fee, 400 ft. W of No. 1. T.D. 4,686 ft.; 7-in. csg. 4,665 ft.
Kitos Oil Co. No. 2-A Sealey, sec. 56-12s-7e. T.D. 4,560 ft.; P.B. to 2,200 ft.; S.D.
Teche Oil Co. No. 1 Schwing, sec. 52-12s-7e. P.B. and sdtkd.; top salt 4,580 ft.; 7-in. csg. 4,181 ft.

Roanoke—Jefferson Davis Parish

Humble O. & R. Co. No. 4-B Devilbiss, sec. 11-9s-4w. T.D. 8,905 ft.; P.B. 6,348 ft.; prep. to sdtk.
Shell Pet. Corp. No. 3 Carter, sec. 1-9s-4w. Top sd. 8,630 ft.; T.D. 8,657 ft.; prep. for D.S.T.

Port Barre—St. Landry Parish

Pan American Prod. Co. No. 2 Colmier, sec. 4-6s-5e. T.D. 4,364 ft.; P.B. to set whipstock at 3,650 ft.; W.O.C. to set.
Pan American Prod. Co. No. 2 Haas Hirsch, sec. 4-6s-5e. Drk.
Texas Co. No. 1 Lahaye, sec. 4-6s-5e. Oil sd. 5,445-51 ft.; T.D. 5,469 ft.; prep. to make D.S.T.

St. Martinville—St. Martin Parish

Continental Oil Co. No. 1 fee, sec. 18-11s-6e. T.D. 8,150 ft.; P.B. 7,353 ft.; perf. csg. 20 holes, 7,344-53½ ft.; I.P. 536 B.P.D.; ¼-in. ck.; C.P. 2,050 lbs.

Sorrento—Ascension Parish

Pan American Prod. Co. No. 5 United Lands, sec. 15-10s-4e. Drk.

Sulphur—Calcasieu Parish

Continental Oil Co. No. 5-A Homeseekers Dev. Co. Drk.
Continental Oil Co. No. 6-A Homeseekers Dev. Co., sec. 29-7s-2w. Drk.
Continental Oil Co. No. 3-A Welch, sec. 28-7s-2w. Sh. and shells 7,715 ft.
Union Sulphur Co. No. 830 fee, sec. 25-9s-10w. Drlg. rock 1,910 ft.

Tepetate—Acadia Parish

Continental Oil Co. No. 1 Doris Fruge, sec. 28-7s-2w. T.D. 8,318 ft.; prep. to test.

Vinton—Calcasieu Parish

Vinton Pet. Co. No. 1 fee, sec. 34-10s-12w. Drlg. sh. 4,241 ft.

White Castle—Iberville Parish

Shell Pet. Corp. No. 3 Shingle, 650 ft. S. 600 ft. E of NW cor. sec. 12-11s-12e. T.D. 6,074 ft.; sdy. sh.; changing bits.

S. LOUISIANA WILDCATS

Acadia Parish

Magnolia Pet. Co. No. 1 Homeseekers Dev. Co., sec. 54-10s-1w. T.D. 9,465 ft.; abd.

Avoyelles Parish

Frost Oil Co. No. 1 Hines Lumber Co., sec. 3-3n-4e. Drk.

Allen Parish

Humble O. & R. Co. No. 2 Bell est., 933 ft. N and E, sec. 28-6s-7w. Drlg. sh. 3,325 ft.

Calcasieu Parish

Buhler Oil Co. No. 2 Faisst, sec. 26-3s-10w. Old TD. 4,412 ft.; S.D. 3,755 ft.

Cameron Parish

Magnolia Pet. Co. No. 1 Hebert, sec. 13-12s-9w. Sd. S.O. 8,606-18 ft.; cmtd. csg. 8,603 ft.; showed S.W.; P.B. 8,603 ft.; W.O.C.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Vingnes, sec. 40-8s-2e. S.D. 300 ft.
Cavalier Oil Co. No. 1 Young, sec. 62-4s-2w. Drk.

East Feliciana Parish

East Feliciana Oil No. 1 West & Budding, sec. 37-1s-1w. Spudded 15 ft. and S.D.

Iberia Parish

Jefferson Lake Oil Co. No. 1 State, Twp. 12s-5e. T.D. 3,610 ft.; P.B. to 3,483 ft.; perf. from 3,460-66 ft.; P.B. to 3,183 ft.; P.B.; drlg. sh. 6,212 ft.
Jefferson Lake Oil Co. No. 322 State Lake Piegneur. T.D. 5,690 ft.; P.B. 3,000 ft.; milling out at 5,586 ft.
Texas Co. No. 1-B State, Vermillion Bay, sec. 20-15s-6e. Drlg. clay 150 ft.

Jefferson Davis Parish

Shell Pet. Corp. No. 1 Lacassine, sec. 20-11s-5w. T.D. 9,844 ft.; S.D.; P.B. 9,375 ft.; perf. csg. 9,340-50 ft.; flwd. mud and S.W.; pres. 2,800 lbs.
Stanolind O. & G. Co. No. 1 C. E. Britt, sec. 15-10s-3w. Drlg. sh. 6,232 ft.
Strake Oil Corp. No. 1 Onezia Miller Est., sec. 7-9s-5w. Drlg. sh. 7,657 ft.

Livingston Parish

Coastline Oil Co. No. 1 Addison Trust Co., sec. 7-7s-3e. Drk.

St. Bernard Parish

John Cartwright No. 1 Meraux Nunes, sec. 19-13s-12e. S.D. 2,641 ft.

St. James Parish

Shell Pet. Corp. No. 1 Colonial Sugar, sec. 5-12s-5e. T.D. 7,522 ft.; top salt 7,492 ft.; P.B. to 2,690 ft.; sdtkd. and drlg. sh. 3,951 ft.

St. Martin Parish

Texas Co. No. 2 State, sec. 14-10s-9e. Drlg. sh. and L. 7,349 ft.
Texas Co. No. 8 St. Martins Land, sec. 17-8s-7e. Drlg. sh. 8,405 ft.

Terrebonne Parish

J. B. Beck et al No. 1 Realty Operators, sec. 103-17s-17e. Drlg. sh. and shells 1,225 ft.
Humble O. & R. Co. No. 1 Continental Land & Fur Co., sec. 30-17s-14e. Drlg. sh. and sd. 4,032 ft.

Vermillion Parish

Continental Oil Co. No. 1 O. C. Hebert, sec. 20-12s-3e. Drlg. sh. 10,280 ft.
Delcambre & Shelton No. 1 Delcambre, sec. 63-12s-6e. S.D. 2,708 ft.
Del-Shell Exploration Co. No. 1 Landry heirs, sec. 1-13s-4e. Drlg. sh. 2,312 ft.
Louisiana Land & Expl. Co. No. 1 La. Fur Co., sec. 16-15-1e. Bldg. foundations.

TEXAS

Week Ending July 4

GULF COAST FIELDS

Raccoon Bend—Austin County

Humble O. & R. Co. No. 5 Sanders (W.O.). T.D. 4,171 ft.; to perf. from 4,043-4,-108 ft.; would not flow; abd.
Humble O. & R. Co. No. 5-A Machemehl. Wm. Smeathers Sur. T.D. 4,120 ft.; 7-in. csg. at 4,101 ft.

Hastings—Brazoria County

Humble O. & R. Co. No. 5 C. A. Cannon, H.&T.B. Sur., sec. 36. T.D. 6,020 ft.; 7-in. csg. at 5,873 ft.; I.P. 30.73 B.P.H.; ¼-in. ck.; T.P. 975 lbs.; C.P. 825 lbs.
Humble O. & R. Co. No. 6 Cannon, H.T.& B. Sur. Drlg. sh. 1,427 ft.
Stanolind O. & G. Co. No. 1-B Avitts, H.T.&B. Sur. No. 29. Bldg. drk.
Stanolind O. & G. Co. No. 1 Wm. R. Curkett, H.T.&B. Sur. No. 35. Drk.
Stanolind O. & G. Co. No. 5 Drake, H.T.&B. Sur. No. 36. T.D. 5,744 ft.; 7-in. csg. at 5,616 ft.; I.P. 586 B.P.D.; ¼-in. ck.; T.P. 910 lbs.; C.P. 900 lbs.
Stanolind O. & G. Co. No. 1 Elliott, Wm. Henry Sur. T.D. 1,857 ft.; 10¾-in. at 1,847 ft.
Stanolind O. & G. Co. No. 1 Reichardt, H.T.&B. Sur. No. 29. T.D. 1,857 ft.; 10¾-in. at 1,855 ft.
Stanolind O. & G. Co. No. 1 Rosmussen & Moore. Moore and Rasmussen Sur. Drlg. sh. 3,607 ft.
Stanolind O. & G. Co. No. 6 Shaw, H.T.&B. Sur. No. 36. Drlg. sh. 3,913 ft.
Stanolind O. & G. Co. No. 6 Williams, A.C.H.&B. Sur. W.O.C. 115 ft.

Danbury—Brazoria County

Humble O. & R. Co. No. 1 Moller, S. A. Towsey Sur. R.U.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 1 Armstrong Plantation fee, Polly and Chance Sur. Drlg. sh. 8,465 ft.

Manvel—Brazoria County

Texas Co. No. 24-B Belcher, H. M. Little Sur. T.D. 5,151 ft.; I.P. 418 B.P.D.; ¼-in. ck.
Texas Co. No. 2-B Helene J. Way, T. Spraggins Sur. T.D. 1,137 ft.; 10¾-in. csg. at 1,127 ft.
Texas Co. No. 22 Houston Oil Field Assn., A.C.H.&B. Sur. No. 1. Drlg. sd. 5,581 ft.
Texas Co. No. 4 Lieder (D.D.) T.D. 4,022 ft. in sd.; 7-in. csg. at 3,971 ft.; pmpg. 100 B.P.D.

Stratton Ridge—Brazoria County

Warner Oil Co. No. 3 Dannenbaum, J. D. Grace Sur. S.D. at 1,280 ft.

West Columbia—Brazoria

Texas Co. No. 13 Abrams, George Tennille Sur. T.D. 3,589 ft.; P.B. to 3,050 ft.; 7-in. csg. 3,083 ft.; perfd. 11 shots 3,023-43 ft.; swbg.
Texas Co. No. 85 Hogg, Geo. Tenille League. Drlg. sd., sh. and L. 2,235 ft.

Heyser—Calhoun County

Humble O. & R. Co. No. 2 Welder, Jose Maria Rios Sur. T.D. 5,473 ft.; recovered 320 ft. of oil on D.S.T. 5,454-73 ft.

Anahuac—Chambers County

Gulf Oil Corp. No. 3 Knowles. Drlg. sh. 2,437 ft.
Humble O. & R. Co. No. 3 J. E. Broussard, H.&T.C. Sur., sec. 63. T.D. 7,085 ft.; 7-in. csg. at 7,056 ft.; I.P. 26 B.P.H.; ¼-in. ck.; T.P. 900 lbs.
Humble O. & R. Co. No. 6 H. A. Gripon, H.&T.C. Sur., sec. 48. T.D. 7,085 ft.; 5½-in. tbg. at 7,040 ft.; drlg. plug.
Humble O. & R. Co. No. 2 C. C. Johnson, H.&T.C. Sur., sec. 49. Drlg. sh. and L. 6,933 ft.
Humble O. & R. Co. No. 2 C. A. Lord, H.&T.C. Sur., sec. 50. T.D. 7,164 ft.; P.B. to 6,759 ft.; sdtkd. to 6,821 ft.; 7-in. csg. at 6,940 ft.; W.O.C.
Humble O. & R. Co. No. 19 Middleton, H.&T.C. Sur. Drlg. sh. 3,200 ft.
Humble O. & R. Co. No. 12 Terrell, H.&T. C. Sur. Cg. sh. 7,070 ft.
Humble O. & R. Co. No. 1-B White, James McGahey Sur. T.D. 7,096 ft.; I.P. 24 B. P.H.; ¼-in. ck.; T.P. 850 lbs.
Humble O. & R. Co. No. 2-B White, James McGahey Sur. Drlg. sd. 56 ft.
Humble O. & R. Co. No. 12 White, James McGahey Sur. Drlg. sh. 2,560 ft.
Sun Oil Co. No. 15 White J. McGahey Sur. T.D. 7,100 ft.; cmtd. back; rmg. at 6,-374 ft.
Sun Oil Co. No. 17 White, James McGahey Sur. Drk.
Sun Oil Co. No. 19 White, James McGahey Sur. T.D. 7,100 ft.; flowing; no gauge.

Big Creek—Fort Bend County

Gulf Oil Corp. No. 69 Davis, B. Young League. Drlg. sh. 4,318 ft.

Orchard—Fort Bend County

Gulf Oil Corp. No. 46 Moore, Leo Burk-napp Sur. Drlg. sh. 3,337 ft.
Gulf Oil Corp. No. 47 Moore, Leo Burk-napp Sur. Drlg. sd. 1,087 ft.

Thompson—Fort Bend County

Naylor et al No. 8 Gehr, S. Kennedy Sur. S.D. 4,421 ft.
Sterling O. & R. Co. No. 1 F. I. Booth, H. Chrisman Sur. T.D. 5,407 ft.; 7-in. csg. at 5,320 ft.; I.P. 27 B.P.D.; pmpg.

High Island—Galveston County

Stanolind O. & G. Co. No. 56 Cade, N. Fitzsimmons Sur. T.D. 5,989 ft.; 7-in. csg. 5,966 ft.; I.P. 371 B.P.D.
Stanolind O. & G. Co. No. 57-A Cade, N. Fitzsimmons Sur. Drlg. sh. 3,223 ft.
Stanolind O. & G. Co. No. 1 Cooper, M. Dunman Sur. T.D. 5,715 ft.; drlg. by stuck D.S.
Stanolind O. & G. Co. No. 8 B.&O. fee, M. Dunman Sur. T.D. 1,289 ft.; W.O.C.
Stanolind Oil & Gas Co. No. 18-H Smith Royalty, M. Dunman Sur. T.D. 5,539 ft.; P.B. 3,650 ft.; sdtkd. at 4,022 ft.; drld. to 5,036 ft.; I.P. 63 B.P.D.; pmpg.

Dickinson—Galveston County

Humble O. & R. Co. No. 4-B Stewart, John Sellers Sur. Drlg. sh. 5,637 ft.
Humble O. & R. Co. No. 6-B Stewart, W. K. Wilson Sur. Drlg. sh. 3,870 ft.
Humble O. & R. Co. No. 4 E. E. Townes, J. S. Jones and B.B.B.&C. Ry. T.D. 8,-025 ft.; top sd. 7,997 ft.; rng. 7-in. csg.
Stanolind O. & G. Co. No. 4 State, Tr T.D. 8,125 ft., top sand at 8,107 ft.; P.B. 8,000 ft.; 7-in. csg. at 7,980 ft.; I.P. 207 bbls. in 20 hrs.; ¼-in. ck.; T.P. 526 lbs.; C.P. 1,600 lbs.
Stanolind O. & G. Co. No. 5 State, Tract 8. T.D. 9,160 ft.; 7-in. csg. at 7,972 ft.

Arriola—Hardin County

Republic Prod. Co. No. 13 Arriola fee, Arriola League. Drlg. sh. 3,210 ft.

Batson—Hardin County

Gulf Oil Corp. No. 175 Wing, F. H. Green Sur. Sh. 1,097 ft.
Lacawanna Prod. Co. No. 1 Butler, W. Donoho Sur. Sd. and sh. 5,810 ft.

Saratoga—Hardin County

Rio Bravo Oil Co. No. C-151 Cotton Tract. T.D. 1,133 ft.; set plug.

Eureka—Harris County

Houston Oil Co. No. 1 Helberg & Lackner, John Rinerman Sur. Drlg. sh. 1,-790 ft.

Mykawa—Harris County

West Prod. Co. No. 1 Minnetex, Wm. Lovett Sur. Drlg. sh. 5,537 ft.

Pierce Junction—Harris County

Rio Bravo Oil Co. No. 14-B Settegast, J. Kappman Sur. T.D. 4,554 ft.; perfd. 3,678-3,722 ft. with 48 shots; setting screen; tstg.
Gulf Oil Corp. No. 12 Cain, J. Hamilton Sur. Drlg. sh. 3,339 ft.
Gulf Oil Corp. No. 4 Manchester. T.D. 4,-612 ft.; I.P. 600 B.P.D.; ¼-in. ck.

South Houston—Harris County

Schwab & C. & C. Drlg. Co. No. 1 Williams. T.D. 4,792 ft.; I.P. 350 B.P.D.; ¼-in. ck.
Dick Schwab No. 2 Williams, H.T.&B. Sur. Spudded.
Smith & McDannald No. 1 Lamb, H.T.&B. Sur. Drlg. sh. 713 ft.
Stanolind O. & G. Co. No. 1 Minnie Barrett, H.T.&B. Sur. No. 6. T.D. 4,800 ft.; prep. to run 7-in. csg.
Stanolind O. & G. Co. No. 2 District 17, Blk. "A." Drlg. sh. 3,028 ft.
Stanolind O. & G. Co. No. 1 Howard, H. T.&B. Sur. No. 6. T.D. 4,775 ft.; 7-in. csg. at 4,588 ft.; W.O.C.
Stanolind O. & G. Co. No. 1 Holder, Unit 5, So. Houston Gardens No. 6. Drlg. sh. and L. 2,360 ft.
Stanolind O. & G. Co. No. 1 Johnson, H. T.&B. Sur. No. 36. Drk.
Stanolind O. & G. Co. No. 1 C. C. Mathews, H.T.&B. Sur. No. 6. Drlg. sh. 271 ft.
Stanolind O. & G. Co. No. 1 Pittman, H. T.&B. Sur. No. 6. Drlg. sdy. sh. 2,153 ft.
Stanolind O. & G. Co. No. 2 Schwartz, H. T.&B. Sur. T.D. 4,775 ft.; I.P. 485 B.P. D.; T.P. 670 lbs.; C.P. 720 lbs.
Stanolind O. & G. Co. No. 1 J. C. Vann, H.T.&B. Sur. No. 6, Unit 8. Digging cellar.
Stanolind O. & G. Co. No. 1 C. J. Wyn-delts, H.T.&B. Sur. No. 6. T.D. 4,775 ft.; 7-in. csg. 4,595 ft.; I.P. 520 B.P.D.; ¼-in. ck.; T.P. 780 lbs.; C.P. 675 lbs.
Sterling O. & R. Co. No. 1 Houston Electric Co., interurban right of way. Set surf. csg.

Tomball—Harris County

Humble O. & R. Co. No. 2-A Brautgam, Drlg. sh. and L. 5,250 ft.
Humble O. & R. Co. No. 3 Handy, J. Pruitt Sur. Drlg. sh. 1,167 ft.
Humble O. & R. Co. No. 4 Hoffman, I.& G.N. Sur. Drlg. sh. 2,924 ft.
Humble O. & R. Co. No. 1 Townsite Unit 2, J. House Sur. T.D. 5,587 ft.; 7-in. csg. at 5,582 ft.; I.P. 24 B.P.H.; ¼-in. ck.; T.P. 750 lbs.; C.P. 800 lbs.
Humble O. & R. Co. No. 5 F. Treischel, J. House Sur. T.D. 5,563 ft.; 7-in. csg. at 5,558 ft.

Amelia—Jefferson County

Glenn H. McCarthy, Inc., No. 1 Langham, H. Williams Sur. Drlg. sh. 5,712 ft.
Humble O. & R. Co. No. 2 S. Pinchback, C. Williams Sur. Drlg. sh. 6,676 ft.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 3-A Pipkin and Davis, Wm. McFaddin Sur. T.D. 6,730 ft.; rmg.

Fannett—Jefferson County

Gulf Oil Corp. No. 10 Burrell, W. H. Smith Sur. Drlg. sh. 3,235 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 15-C Cleveland, J. Pleasant Sur. T.D. 5,903 ft.; I.P. 50 B. P.D.

Esperson—Liberty County

General Crude Oil Co. No. 26 Esperson, C. W. Fisher Sur. Drlg. sh. 3,610 ft.
General Crude Oil Co. No. 16 Moores Bluff. Drlg. sh. 1,719 ft.

Hankamer—Liberty County

Ucom Oil Co. No. 5 Ezzell, Levi Borrow Sur. T.D. 5,590 ft.; fsg.

Van Vleck—Matagorda County

Skelly Oil Co. No. 8-B Cobb, M. Cummins Sur. Drlg. sdy. sh. 7,180 ft.
Skelly Oil Co. No. 1 Langham, M. Cum-mings Sur. T.D. 8,248 ft. oil sd.; circulating.
Skelly Oil Co. No. 2 Metzler, M. Cummins Sur. Drk.
Skelly Oil Co. No. 1 G. Moore, I.&G.N. Sur. Drlg. sdy. sh. 6,607 ft.
Skelly Oil Co. No. 7-B Cobb, M. Cummings Sur. Top oil sd. 7,469 ft.; T.D. 7,495 ft.; 7⅝-in. csg. 7,495 ft.; W.O.C.

Livingston—Polk County

Humble O. & R. Co. No. 28 Granburg, A. Visca Sur. Drlg. sh. and L. 3,854 ft.

Refugio—Refugio County

Local Oil Co. No. 1 Rhea, Refugio Town Tr. T.D. 4,924 ft.; I.P. 350 B.P.D.; 3/16-in. ck.
National Pet. Corp. No. 1 S.L.B.&M.R.R. R.U.
W. F. Stone No. 1 C. P. Fox, Refugio townsite tr., Blk. 1, sec. 5. Drlg. sh. 2,-000 ft.
United Gas Co. No. 19 Fox. Drlg. sh. 3,-790 ft.
United Prod. Co. No. 13 Fannie Heard, Refugio Town Tr. Cg. sh. 4,850 ft.
United Prod. Co. No. 25 M. F. Lambert, Swisher Sur. T.D. 5,894 ft.; I.P. 315 B. P.D.
United Prod. Co. No. 8 N. J. Ryalls, Refugio Town Tr. T.D. 4,930 ft.; 5-in. csg. 4,923 ft.; I.P. 290 B.P.D.; 3/16-in. ck.

Tomoconnor—Refugio County

Quintana Pet. Co. No. 36-A Tom O'Connor, Swisher Sur. T.D. 5,900 ft.; I.P. 1,300 B.P.D.; ¾-in. ck.

Placedo—Victoria County

Barnsdall-American Liberty No. 3 W. R. Smith, A. Murphy Sur. Drlg. sh. 2,860 ft.
Barnsdall and Coastal Oil Co. No. 3 Wright, J. M. Bronson Sur. T.D. 4,774 ft.; 7-in. csg. at 4,760 ft.
Eastern Texas Pet. Co. No. 2 Hosek, J. M. Bronson Sur. T.D. 4,778 ft.; I.P. 220 B.P.D.; T.P. 220 lbs.; C.P. 800 lbs.
Haynes B. Ownby No. 1 Joe Malik, J. M. Bronson Sur. T.D. 4,772 ft.; I.P. 225 B.P.D.; ¼-in. ck.; T.P. 550 lbs.
Superior O. & G. Co. No. 2-B Henderson & Pickering, J. M. Bronson Sur. T.D. 4,785 ft.; 7-in. csg. at 4,778 ft.; I.P. 10 B.P.H.; ¼-in. ck.; T.P. 150 lbs.; C.P. 380 lbs.

Clay Creek—Washington County

Sun Oil Co. No. 6 Caraway, J. F. Perry Sur. T.D. 1,223 ft.; comp.; no gauge.
Sun Oil Co. No. 7 Caraway, J. F. Perry Sur. Rig.
Sun Oil Co. No. 1 H. Lauter, N. Clay Sur. Drlg. sh. 6,489 ft.

Louise—Wharton County

Pure Oil Co. No. 6 Chas. T. Kauntze, Mor-ris-Cummins Sur. No. 19. T.D. 5,161 ft.; tstd. blowout preventer.
Pure Oil Co. No. 5 McIntyre, Morris-Cum-mins Sur. T.D. 5,164 ft.; circulating.
Pure Oil Co. No. 1 Sara G. Shult, L. P. Ogden Sur. R.U.

Pickett Ridge—Wharton County

Adrian Moore No. 1 W. P. Wilbeck, J. Tele Forliner Sur. T.D. 4,719 ft.; perf. 4,-701-02 ft. with 12 holes; swbd. S.W.; S.D.
Edwards Drlg. Co. No. 1 E. D. Farmer, I.&G.N. Sur. No. 39. T.D. 4,702 ft.; 7-in. csg. 4,702 ft.; comp.; no gauge.
Rio Bravo Oil Co. No. 1 T.&N.O. R.R. Co., I.&G.N. Sur. No. 39. T.D. 3,604 ft.; P.B. 3,173 ft.; W.O.C.
Texas Co. No. 23-A Pierce, I.&G.N. Sur. No. 38. T.D. 4,709 ft.; I.P. 19 B.P.H.; ¼-in. ck.; T.P. 500 lbs.; C.P. 600 lbs.
Texas Co. No. 24-A Pierce, I.&G.N. Sur.

T.D. 4,713 ft.; 7-in. csg. at 4,705 ft.; rng. screen.

Texas Co. No. 25-A Pierce, I.&G.N. Sur. Drlg. sh. 2,450 ft.

Texas Co. No. 26-A Pierce, I.&G.N. Sur. Drk.

Withers—Wharton County

Texas Co. No. 2-B Pierce, Pierce Est., Blk. B. Drlg. gmb. and bldrs. at 1,182 ft.

Texas Co. No. 8-C Pierce, Wm. Pettus Sur. Drlg. L. and sd. 4,793 ft.

Texas Co. No. 9-C Pierce, John Caldwell Sur. Drlg. sh. and sd. 1,153 ft.

GULF COAST WILDCATS

Austin County

W. H. Mitchell et al No. 1 F. Fenner, J. Fitzgibbons Sur. R.U.

Brazoria County

Gulf Oil Corp. No. 1 Fairfield, A. Robinson Sur. Drlg. sh. 3,526 ft.

Strake Oil Corp. et al No. 1 D. K. Poole, J. W. Hardin Sur. Drlg. sh. 7,244 ft.

Texas Co. No. 3 Freeport Sulphur Co., C. Arelo Sur. T.D. 5,954 ft.; top sd. at 5,555 ft.

Calhoun County

Continental Oil Co. No. 1 Austin Estate, sec. 12, Blk. H. T.D. 6,614 ft.; 11¾-in. csg. 6,598 ft.

Colorado County

Coyle-Concord & Sterling No. 1 Mary E. South, I.&G.N. Sur., sec. 41. Rig and S.D.

Fort Bend County

Texas Co. No. 1 Sugarland, Inc., John Foster Sur. Drlg. sd. and sh. 2,611 ft.

Galveston County

Shell Pet. Corp. No. 1 Maco Stewart, Spillman Sur. Drlg. sh. 5,843 ft.

Sun Oil Co. No. 1 Houston Farms, D. Buckley Sur. Bldg. drk.

Sun Oil Co. No. 2 Hughes, W. C. M. Baker Sur. Drlg. sh. 3,068 ft.

Hardin County

S. Hindman No. 1 Howth, A. J. Cotton Sur. S.D. 5,315 ft.

Republic-Houston Oil Co. No. 1 Brooks. Drlg. sh. 2,334 ft.

Harris County

Bunte O. & G. Co. No. 1 Lobit et al, Benjamin Barrow Sur. Drk.

Circle W. Oil Co. No. 1 Houston Realty Sales Corp., Harris & Carpenter Sur. Cg. sh. 5,440 ft.

Zeni Oil Co. No. 1 W. A. Perkins, A. Sherrell Sur. Drlg. sh. and sd. 6,563 ft.

Houston County

Ellison & McBride No. 1 Bean, E. Stedman Sur. T.D. 6,038 ft.; tested 30,000,000 ft. of gas; 2 gals. distillate on 4-min. D.S.T., 6,028-38 ft.; cg. ahead.

Jackson County

Steinberger Pet. Corp. No. 1 Drushel, F. Rodriguez Sur. Drlg. sh. 3,310 ft.

Jefferson County

McSpadden et al No. 1 Burrell estate, Abd. 7,835 ft.

Shell Pet. Corp. No. 1 Carpenter, M. E. Piveto Sur. Drlg. sh. 6,501 ft.

Sun Oil Co. No. 1 Herbert & Broussard, B. Blackman Sur., Abst. No. 2. Drlg. sdy. sh. and shells 9,007 ft.

Matagorda County

Marathon Oil Co. No. 1 Kountze, I.&G.N. Sur. No. 11. 13⅜-in. csg. 1,523 ft.; T.D. 1,547 ft.

Pierce Estate Inc. No. 1 Fee, Wm. Brown Sur. Drlg. sd. 4,160 ft.

Sun Oil Co. No. 1 Craig, Thomas Williams, Sur. T.D. 6,326 ft.; P.B. 5,850 ft.; perf. csg. 5,340-95 ft.; swbd. dry; perf. csg. from 5,240-95 ft.; P.B. to 5,180 ft., to perf. from 5,150-75 ft.; pulling screen.

Texas Gulf Prod. Co. (H. M. Smith) No. 2 Wadsworth, S. R. Fisher Sur. T.D. 1,870 ft.; rmg.

Montgomery County

W. O. Bilonski et al No. 1 J. W. Wood, Wm. Weir Sur. T.D. 3,757 ft.; 5 3/16-in. csg. 3,720 ft.; flwd. wet gas and some S.W. through ¼-in. ck.; T.P. 450 lbs.; C.P. 350 lbs.; may P.B.

Orange County

Tide Water Oil Co. No. 1 E. N. Brown, Mary Latham Sur. Drlg. sh. 6,950 ft.

Polk County

Turnbull & Irwin No. 1 Mrs. Roberts, J. F. de Rumayor Sur. Abd. 5,282 ft.

Refugio County

Benedum & Trees No. 1 R. H. Welder, Juan Pabedan Sur. R.U.

Mills Bennett Prod. Co. No. 1 Walzell, E. Lopez Sur., Bonnie View Addn. Drlg. sdy. sh. 4,361 ft.

San Jacinto County

J. A. Deering No. 1 Randolph, V. Flores Sur. Drlg. sh. 640 ft.

Tyler County

McArthur & Mixon No. 1 D. D. Kounts, J. A. Honkins Sur. T.D. 65 ft.

Walker County

L. M. Gay et al No. 1 M. E. Stubblefield, G. Bodilla Sur. R.U.

Wharton County

Cockburn Oil Co. No. 1 Fee, J. Smith & H. McKinzie Sur. Drk.

Pure Oil Co. No. 1 A. P. Borden et al, W. H. Leckie Sur. No. 25. R.U.

Pure Oil Co. No. 1 Sam Shultz, L. P. Odgen Sur. No .108. Drlg. sh. 4,474 ft.

Smith & McDannald No. 1-A Priesmeyer, Charles Riley Sur. T.D. 6,624 ft.; rng. electrical cg. test.

S. W. TEXAS WILDCATS

Aransas County

Buckingham Oil Co. No. 1 McCampbell, sec. 41-42, James Arida Sur. T.D. 7,501 ft.; drlg. in sdtrkd. hole 5,223 ft.

Atascosa County

Atascosa Trust No. 1 Domsch, 160 ft. S line, 300 ft. E line, 152-ac. lease, J. T. Russell Sur. 1,222. T.D. 3,624 ft.; drlg. 50 ft. deeper.

Helnetia Oil Co. No. 1 S. Pratt, 1,400 ft. NW line, 3,470 ft. SW line, J. de la Garza Sur. 46. Drlg. sdy. sh. 1,931 ft.

Bastrop County

Marts & Beavens No. 1 Jenkins, cen. Lot 24, Bastrop Township. Drill stem stuck 3,410 ft.

Bee County

Eden Oil Co. No. 1-C Copeland, 1,723 ft. N line, 330 ft. W line, 80-a. tr., O. Marshall Sur. Drlg. sh. 3,537 ft.

LaSalle Oil Co. No. 1 Ray, 360 ft. E line, 330 ft. N line, 40-ac. tr., Anna Burk Sur. T.D. 4,697 ft.; S.D.

Nichols & Quinn No. 1 Scott, Blk. 7, J. Molina Sur., Uranga grant. Derrick.

H. A. Pressey No. 1 Hicks, 1,450 ft. S line, 150 ft. W line lease, J. of Uranga gr. Sd. 3,537-55 ft.; show oil; to set 5½-in. csg. 3,572 ft.

Bexar County

Woodward & Hardy No. 1 DeVilbiss, J. W. DeVilbiss Sur. S.D.; wtr. 2,280 ft.

Brooks County

California Co. No. 1 B. Garcia, 465 ft. N and W lines lse., B. Garcia tr., Sainiaa Sur. T.D. 3,022 ft. Fsg.

Burleson County

Red Bank Oil Co. No. 1 Crain, 2,875 ft. S line, 1,500 ft. E line, E. Santel Sur. Bldg. drk.

Caldwell County

Elam et al No. 1 Francis, 450 ft. SW and SE lines, 291-ac. tr., Young Sur. Set csg. 1,160 ft.; W.O.C.

L. M. Kniffin No. 1 Young, 1,000 ft. W line, 150 ft. S line, 364-ac. tr., J. R. Miller Sur. R.U.

Wheelock & Collins No. 1 Alexander, 150 ft. NE line, 1,095 ft. NW line, 158-ac. tr., Spiller Sur. Recmtg. csg. 300 ft.

Cameron County

W. W. Ely No. 1 Port Isabel Irrigation Co., Blk. 17, Shares 29, 30 and 31, P. I. I. Co. Subd. Loc.

Dewitt County

L. W. Capps No. 1 Buchoun, 150 ft. N and E lines, S. V. Slade Sur. Drlg. sh. 2,021 ft.

Universal Oil, Gas & Mining Co. No. 1 Schuebel, 330 ft. S and W lines tr., Fitzgerald gr. S.O. 1,559 ft.; bailing.

Duval County

Conservative Oil Co. No. 1, D.C.R.C. Sur. 51. Drlg. sh. 2,053 ft.

Gifford Oil Co. No. 1 Roach, Sur. 200. Cg. sh. 2,536 ft.

C. G. Glasscock No. 2 Milano S.&G. Co., 330 ft. N line, 2,310 ft. E line, Sur. 88. Cd. sd. 3,275-91 ft.; set 7-in. csg. 3,273 ft.; swbd. dry; pulling tbg. and lnr. to C.O.

Frank Gravis No. 1 C. K. Gravis, 1,650 ft. SE line, 990 ft. SW line, Sur. 250. T.D. 5,150 ft.; S.D.

Hamil & Smith No. 1 Benavides, Subd. 1, J. B. Sands, Mesquite Sur. Drlg. sh. 2,927 ft.

Randon Oil Co. No. 1 Central Securities, 330 ft. N and W lines, Lot 23, Hinoso gr. Drlg. sh. 3,826 ft.

Rogers & Rogers No. 1 E. R. Hagist, 330 ft. S and W lines, Lot 14, sec. 265. M.I.M.

Rogers & Rogers No. 1 Pena, 3,337 ft. SW line, 1,306 ft. NW line, R. S. de Pena plat. Sd. 2,850-62 ft.; perf. csg. 2,783-95 ft.; making 50,000 ft. wet gas and 15 to 20 B.P.D. of oil.

Goliad County

C. Morgan No. 1 Metz, 4,290 ft. N line, 330 ft. E line tr., G. Barrera Sur. Set Sur. csg. 460 ft.; W.O.C.

Zeni Oil Co. No. 3 Lutenbacher, 330 ft. N and W lines, SE¼, sec. 25. Top Pettus sd. 5,365 ft.; show of saturation; set 7-in. csg. 5,352 ft.; W.O.C.

Hidalgo County

Gulf States Oil Co. No. 3 John Engleman, Lot 3, Blk. 70. T.D. 6,512 ft.; sh.; P.B. 6,495½ ft.; drlg. 6,495½-98 ft.; showed 5 to 6 bbls. fluid per hr., 90% S.W.; 10% dist. on 10/64-in. ck. and 500,000 ft. gas; S.D.; closed in; C.P. 2,250 lbs.

Quintana Petroleum Co. No. 1 John C. Engleman, Lot 10, Blk. 94, Las Mestanas grant. T.D. 8,893 ft.; D.&A.

Jim Hogg County

J. J. Cosner No. 1 Vela hrs., Sh. 1, Blk. 5, Clark & Cowden Subd., El Peyote gr. Loc.

Magnolia Pet. Co. No. 1 Magnolia-Holbien, Sur. 35, Arriba gr. Cg. 4,323 ft.

Jim Wells County

Edwin M. Jones No. 1 Robt. Adams, 445 ft. S and W lines, Blk. 47, Waldron Oil & Gas Subd., Adams ranch. Sd. 4,703-36 ft., odor oil. Drlg. sh. 6,244 ft.

R. A. Graddy No. 1 Bennett, 330 ft. N and W lines, Lot 87, sec. 76. Spudded, S.D.

Gist & Graddy No. 1 Owens, 660 ft. N line, midway E and W lines, Sur. 151. S.D. 1,927 ft.

Karnes County

R. L. Barnett No. 1 fee, NE cor. 568-ac. tr. Drlg. 1,316 ft.

Worth Oil Co. No. 1 Hysaw, 1,070-acre tract, Sequin grant. M.I. rotary.

Kleberg County

E. B. Clark No. 1 Kivlin, 150 ft. N and E lines, Blk. 8, sec. 39, Kingsville Town & Improvement Subd. Drlg. 1,386 ft.

LaSalle County

Kennedy & Johnston No. 1 Gilman & Wildenthal, 330 ft. NW and NE lines, 140-a. tr., Sur. 283. Derrick.

Hartmangruder Drlg. Co. (Paul Meador) No. 1 Reed, sec. 136. S.D. 3,125 ft.

W. H. Vernon No. 1 Las Abias ranch, 150 ft. N line, midway E and W lines, sec. 726. Loc.

Live Oak County

Dirks Bros. No. 1 Nichols, 790 ft. S line, 365 ft. W line S. Ryan Sur. A-35. Drlg. 1,212 ft.

O. Dovre No. 1 San Antonio Joint Stock Land Bank, 150 ft. N line, 725 ft. E line, Plat 27, Tips Subd., Everett Sur. Sd. 1,783-90 ft.; blew out; killed; fsg. 1,790 ft.

J. J. McRoberts No. 1 Mahoney, 3,100 ft. SW Junction Three Rivers, Tilden Highway and Thomas Henry Sur. lines, 150 ft. N. No report.

McMullen County

R. J. Hill No. 1 Richardson, 990 ft. E line, 1,650 ft. N line, Sur. 158. Drlg. 1,852 ft.

C. I. Jennings No. 1 Regan, 1,070 ft. S. Frio River, 330 ft. W line, 642-a. tr., Haley Grant. Set sur. csg. W.O.C.

Ranch Oil Co. No. 1 La Chusa, 330 ft. N and W lines, SE¼, Sur. 52. Loc.

C. C. Shumway No. 9 Shiner, 330 ft. N & W lines, NE¼ sec. 51. R.U.

Milam County

J. C. Kilgore No. 1 Newton, J. Reed Sur. Drlg. 2,526 ft.

Nueces County

W. D. Hines No. 1 Flato, NW cor. Driscoll Townsite. Resume drlg. 5,572 ft.

M. F. Huriburt No. 1 Phillips, sec. 9 Flour Bluff Garden Tracts. T.D. 7,503 ft.; P.B. 6,753 ft.; set 7-in. csg.; perf. 6,633-43 ft.; D.S.T. with 1,000 ft. wtr. recovered 750 ft. oil and 180 ft. drlg. wtr.; no show S.W.

G. M. Richardson No. 1 Carter, cen. NW¼, SE¼, sec. 8, Laureles Farm tracts. Loc

Terminal Oil Prod. Co. No. 1 Thurman, 660 ft. N and W lines, SW¼, sec. 16 T.D. 6,505 ft.; D.&A.

San Patricio County

Atlantic Oil Prod. Co. No. 1 Maryland Trust Co., cen. W½, Lot 11, Blk. 42, McCampbell Subd. Drlg. 3,221 ft.

Benedum & Trees Oil Co. No. 2 Welder sec. 19. T.D. 7,015 ft.; pulling tbg. 5,720 ft.

C. B. Bunte No. 1 Mayfield, 131 ft. W line, 237 ft. N line, Tr. 11, Ross Subd R. U. and S.D.

O. W. Killiams No. 1 Green, 150 ft. E and NW lines tract, Geo. H. Paul Subd. M.I.M.

Joe Lundins No. 1 Welder, 330 ft. N and W lines, sec. 30, Paul Subd. Fsg. 5,005 ft.

Plymouth Oil Co. No. 2-D Welder, 466 ft. N and E lines, sec. 4. Drlg. 2,628 ft.

Taft Prod. Co. No. 1 Thomas, 150 ft. N & E lines, sec. 6, 2nd Addn. Taft Farm Lands. Drlg. 4,057 ft.

Starr County

J. F. Anderson No. 1 Yzagierre, Tr. 7 Porc. 79, J. of Camargo. T.D. 2,034 ft.; reaming down.

Porter Evans No. 1 Starr County Cattle Co., Lot 14, Evans Subd., Sh. 60, Porc. 89, J. of Camargo. T.D. 1,600 ft.; S.D.

Bishop & Henshaw No. 1 Martin, 660 ft S line, 927 ft. W line, Sur. 627. T.D. 3,530 ft.; D.&A.

Coreta Oil Co. No. 1 Pena, 150 ft. S and E lines, Sh. 80, Porc. 81. T.D. 1,500 ft.; S.D.

A. A. Kelly No. 1 Guerra & Son, Blk. 25, Porc. 55. Drlg. 220 ft.

Larkin & Warr No. 1 Kelsey-Bass, 533 ft. N line, 408 ft. E line, Lot 8, Porc 87. Top gas sd. 5,300 ft.; drlg. 5,307 ft.

Ed Leach No. 1 Dana Est., Porc. 84, J. of Camargo. Drlg. 463 ft.

Ed Leach No. 2 Wood Est., Por. 84, J. of Camargo (old Weyel No. 1 Wood) W.O. T.D. 2,160 ft.; reworking.

Sun Oil Co. No. 1 Guerra & Sons, Blk. 25, Porc. 55. Drlg. 57 ft.

Webb County

Ohio Fuel Oil Co. No. 1 D.C.R.C., 330 ft S and W lines, Lot 16, Zapata School Lands Sur. 4. D.&A. 2,105 ft.

Starr Dev. Co. No. 1 Benavides, Sur. 173. Spudded in.

Willacy County

M. E. Morton et al No. 1 Santa Rosa, 330 ft. N and E lines, Lot 12, Blk. 31 Santa Rosa Subd., Sh. 44. Loc.

Shell Pet. Corp. No. 1 Yturria Land & Cattle Co., 990 ft. S and E lines, Share 64, San Juan de Carricitos gr. Drlg. sdy. sh. 6,421 ft.

Wilson County

A. G. Reimenschneider No. 2 L. Harrell 750 ft. NE line, 2,800 ft. NW line Barrera Sur. Fsg. 740 ft.

Zavalla County

Bay Oil Co. No. 1 Nat. Bank of Commerce, sec. 43, A.B.&M. Sur. T.D. 6,585 ft.; P.B. 6,252 ft.; lost swab in hole; stdg. 2,500 ft. oil in hole; to shoot.

Frank Buttram No. 1 Whitecotton, 2,400 ft. N line, 200 ft. W line, A.B.&M. Sur. Resumed drlg. 5,510 ft.

S. W. TEXAS PROVEN

Dirks—Bee County

Dirks Bros. No. 7 Harris, 65-acre tract, J. S. Dugat Sur. Sd. 3,891-3,901 ft.; comp.; no gauge.

Ray—Bee County

Sunburst Oil Co. No. 1 Ray, W. B. Blanchard Sur. Sd. 3,926-29 ft.; Comp. 165 B.P.D.

Voss—Bee County

Dirks Bros. No. 1 Berger, 330 ft. N and E lines lease, E. C. White Sur. Cg. 4,042 ft.

Alta Verde—Brooks County

Fairway Prod. Co. No. 1 Singer, Sur. 312. Cg. 866 ft. (cor.).

Dick Young No. 5 Singer, Blk. 12, Sur. 312. Set csg. 40 ft. T.D. 100 ft. W.O. orders.

Driscoll—Duval County

Continental Oil Co. No. 9-A Sevier, Sur 23. P.B. 3,305-48 ft. from 3,414 ft.; comp. est. 100 B.P.D.

Continental Oil Co. No. 10-A Sevier, Sur. 448. Loc.

Government Wells—Duval County

Morris Stein No. 1 Hahl, 160-ac. tract, Sur. 47. Spudded, S.D.

J. T. Stover No. 1 Hester, 330 ft. S and E lines, SW¼, NE¼, Sur. 47. Corrected depth 1,300 ft. S.D.

Hoffman—Duval County

Duval Oil Corp. No. 5 Hoffman, Sur. 118. Sd. 2,850-52 ft.; drlg. plugs.

Duval Oil Corp. No. 4 Ruiz, Sur. 119. Comp. 18 B.P.H. jetting; sd. 2,878-88 ft.

Duval Oil Corp. No. 5 Ruiz, Sur. 119. R.U.

Ralph E. Fair No. 1 Hoffman, 990 ft. NW line, 1,650 ft. NE line, Sur. 114. Loc.

W. D. Master No. 1-A Ruiz, 380 ft. NE line, 320 ft. SE line, NW¼ Sur. 128. R.U.

Plymouth Oil Co. No. 3-B Hoffman, Sur. 118. Set csg. 2,912 ft.; W.O.C.

Rogers & Rogers No. 3 Hoffman, Sur. 118. Set csg. 2,881 ft.; W.O.C.

Rogers & Rogers No. 4 Sutherland, E½, Sur. 120. Sd. 2,895-2,900 ft.; drlg. plugs.

Standard of Kansas No. 5 Hoffman, Sur. 118. Sd. 2,865-74 ft.; comp. 250 B.P.D. on ½-in. ck.

Labbe—Duval County

Stanolind O. & G. Co. No. 5 Farmers Life Ins., Sur. 416, 660 ft. S and E No. 1. T.D. 2,490 ft.; D.&A.

Loma Novia—Duval County

Bridwell Oil Co. No. 10-C Hubbard, Sur. 75. Drlg. plugs 2,550 ft.

Bridwell Oil Co. No. 2-D Hubbard, Sur. 73. Loc.

Duval Oil Corp. No. 4 Ruiz, Sur. 118. R.U.

Highland Oil Co. No. 25 Hubbard, Sur. 72. Sd. 2,726-2,809 ft.; comp. 80 B.P.D. on ½-in. ck.

Humble O. & R. Co. No. 42-B Hubbard, Sur. 72. T.D. sdy. sh. 2,739 ft.; set csg. 2,713 ft.; comp. est. 445 B.P.D.

Humble Oil & Refining Co. No. 58-B Hubbard, Sur. 83. T.D. sh. 2,756 ft.; R.U. to pump.

Humble O. & R. Co. No. 13 Ruiz, Sur. 553. Sd. 2,740-49 ft.; comp.; no gauge.

Humble O. & R. Co. No. 14 Ruiz, Sur. 552. Selg. sh. 2,444 ft.

Magnolia Pet. Co. No. 43 Hahl, Sur. 67. Sd. 2,694-2,710 ft.; comp. 72 B.P.D. on pump.

Magnolia Pet. Co. No. 44 Hahl, Sur. 67. Set csg. 2,708 ft.; W.O.C.

Rodney DeLange No. 11 B.C.C., Sur. 76. Set csg. on sd. 2,735-48 ft.; W.O.C.

Shell Pet. Corp. No. 28 Hubbard, 1,626 ft. W line, 1,913 ft. S line lse., Sur. 77. T.D. 2,732 ft.; comp. 5 B.P.H.

Shell Pet Corp. No. 29 Hubbard, 989 ft. E line, 1,086 ft. N line lease, Sur. 77. Drlg. 921 ft.

Shell Pet. Corp. No. 9 Mendoza, 1,034 ft. S line, 990 ft. W line lease, Sur. 68. T.D. 2,700 ft.; swbg. in.

Texas Co. No. 45 Wendt, Sur. 45. Drlg. 2,611 ft.

Texas Co. No. 46 Wendt, Sur. 68. T.D. 2,663 ft.; comp. 23 B.P.H.

Loma Vista—Duval County

Atlantic Oil Prod. Co. No. 1 J. F. Welder hrs., 330 ft. N and E lines, 160-ac. tr., Sur. 103. Loc.

Pan American Pet. Co. No. 1-H Welder, 330 ft. N and W lines, 160-ac. tr., Sur. 103. M.I.M.

Shell Pet. Corp. No. 1-B Welder, 330 ft. S line, 2,590 ft. W line, Sur. 69. Drlg. 1,055 ft.

Palangana—Duval County

Frank Granis No. 3-A Scharlett, Sur. 255. Drlg. 1,157 ft.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 6 D.C.R.C., 990 ft.

N line, 330 ft. W line, Sur. 95. Rng. csg. on sd.

Peters—Duval County

Highland Oil Co. No. 1 Peters, 330 ft. N line, 990 ft. W line, Sur. 117. Loc.

Mills Bennett Prod. Co. No. 3 Peters, 980 ft. N line, 330 ft. W line, Sur. 178. Sd. 2,595-2,615 ft.; comp. 384 B.P.D.

Navarro Oil Co. No. 1 Peters, 330 ft. S and E lines, W 480-ac. tr., Sur. 39. T.D. 3,005 ft.; set csg. 2,950 ft.; W.O.C.

Seven Sisters—Duval County

Atlantic Oil Prod. Co. No. 3-E Welder, Sur. 102. T.D. 2,419 ft.; comp.; no gauge.

Atlantic Oil Prod. Co. No. 4-E Welder, Sur. 102. Skdg. on.

Blanco Oil Co. and Buchanan No. 13-A Welder, E½, SW¼, Sur. 385. Sd. 2,180-91 ft.; testing.

S. B. Cloyes No. 1 Serna, 330 ft. N and E lines tr., Sur. 384. Loc.

Cox & Hamon No. 1 Telford, NW¼, Sur. 386. Loc.

Darby Pet. Corp. No. 2-A Welder, 1,650 ft. S, 990 ft. W, SW cor. Sur. 381, in Sur. 102. T.D. 2,440 ft.; comp.; no gauge.

Darby Pet. Corp. No. 3-A Welder, Sur. 102. Skdg. on.

Humble O. & R. Co. No. 5 Badgley, Sur. 307. Sd. 2,524-32 ft.; comp. est. 415 B. P.D.

Humble O & R. Co. No. 12-B Serna, Sur. 384. T.D. 2,185 ft.; D.&A.

Humble O. & R. Co. No. 14 Smith, Sur. 382. Set sur. csg. 58 ft.; W.O.C.

Humble O. & R. Co. No. 16 Smith, Sur. 382. Drlg. 2,466 ft.

Humble O. & R. Co. No. 11-B Serna, Sur. 384. T.D. 2,192 ft.; comp. gasser; T.P. 575 lbs. on ⅝-in. ck.

Illinois Pet. Co. No. 3 Hazelwood, 1,650 ft. E line, 330 ft. N line, Sur. 110. R.U.

Chas. Kleiner No. 1 Chernosky, Sur. 226. Sd. 2,693-2,708 ft.; completing.

Ed Leach No. 1 Serna, 990 ft. N and E lines, NE¼ SE, Sur. 384. Drk.

Mid-Continent Pet. Corp. No. 8 Serna, Sur. 384. Sd. 2,199½-2,208 ft.; tstg.

Mid-Continent Pet. Corp. No. 9 Serna, Sur. 384. No report.

Navarro Oil Co. No. 7 Welder, Sur. 383. Sd. 2,466-73 ft.; comp. 16 B.P.H. on ¼-in. ck.

Pan American Pet. Co. No. 2-C Welder, Sur. 383. Loc.

Pan American Prod. Co. No. 3-C Welder, Sur. 383. Sd. 2,461½-68 ft.; comp. 15 B.P.H.

Pan American Pet. Co. No. 4-C Welder, Sur. 383. Set csg. 2,460 ft.; W.O.C.

Parr Oil Co. No. 1 Welder, Sur. 102. T.D. 2,747 ft.; D.&A.

Reliance Oil & Royalty Co. No. 5 Drummond, Sur. 308. Comp. est. 30 B.P.H. on ⅛-in. ck.; sd. 2,505-24 ft.

Texas Co. No. 2 Badgley, Sur. 307. M.I.M.

Westheimer & Daube No. 12 Campos, Sur. 224. No report.

Pearsall—Frio County

Amerada Pet. Corp. No. 7 Halff & Oppenheimer, 1,320 ft. W line, 330 ft. S line, J. H. Gibson Sur. No. 16. T.D. 3,926 ft.; P.B. 3,877 ft.; W.O.C.

Amerada Pet. Corp. No. 2 Michael, 511 ft. N line, 466 ft. W line, A. Lynch Sur. 321. Drlg. 3,912 ft.

Amerada Pet. Corp. No. 1 Miller, 466 ft. NE and SE lines tr., B. Saltillo Sur. Drlg. 4,331 ft.

Amerada Pet. Corp. No. 3 Smith, 466 ft. E line, 905 ft. N line, J. B. Mason Sur. 322. Drlg. 2,527 ft.

Combs & Oakes No. 1 Arp, 330 ft. S and E lines, 102-ac. tr., S. Blair Sur. 297. Top chalk 5,507 ft. Saturation cored 5,535-55 ft.; drlg. plugs 5,510 ft.

North Pettus—Goliad County

Bostex Oil Co. No. 1 Lackey, 1,650 ft. NW line, J. Gomez Sur., 1,660 ft. SW of No. 3-A. Loc.

Jane Oil Co. No. 3-B Gillette, 810 ft. SE No. 2-B, cen. N and S lines, J. Gomez Sur. T.D. 2,116 ft.; setting whipstock 2,116 ft.

Jane Oil Co. No. 3 Runge State Bank, 330 ft. NE and SE lines, G. B. Meyers Sur. Comp. 120 B.P.D. on 12/64-in. ck.; T.D. 3,703 ft.

Magnolia Pet. Co. No. 2 Gillette, J. Gomez Sur. Cg. sh. 3,666 ft.

Magnolia Pet. Co. No. 3 Welden & Sackey, J. Gomez Sur. Drlg. 1,437 ft.

Walton—Guadalupe County

Louis Crouch No. 2 Getz, J. D. Clements Sur. T.D. 2,177 ft.; set csg. 2,172 ft.; W.O.C.

Mercedes—Hidalgo County

Union Sulphur Co. No. 7 American Rio Grande L. & I. Co., 4,000 ft. SE of No. 1 Farm Tr. 2,309, Blk. 59. T.D. 7,597 ft.; perf. 7,578-80 ft.; testing.

Union Sulphur Co. No. 8 American Rio Grande L. & I. Co., 660 ft. N & E lines Tr. 2,120, Blk. 87. T.D. 7,560 ft.; sdtrkd. 7,220 ft.; drlg. 7,332 ft.

Samfordyce—Hidalgo County

J. T. Barlow No. 1 Marta Flores de Chapa, Tr. 250, Porc. 39 (W.O.). Cored sd. 2,938-50 ft.; set 4-in csg.; W.O.C.

Barnett Pet. Corp. No. 3-A Sheldon, Tr. 11, Porc. 41. T.D. 2,645 ft.; D.&A.

Danvers & Harrison No. 1 Uvalde Vallalon, 230 ft. N line, 148 ft. E line, 6.32-ac. tr., Tract 252, Porc. 38. M.I.M.

Dean Bros. No. 2 Lula George, 450 ft. S line, 150 ft. W line, 10-ac. tr., Tract 13, Porc. 41. Set sur. csg. 206 ft.; W.O.C.

G. W. Wheeler No. 1 F. Farias, Tr. 255, Porc. 39. Spudded and S.D.

Bentonville—Jim Wells County

La Jita Corp. No. 1 Erck, 330 ft. N & E lines, N½, sec. 75. M.I.M.

La Jita Corp. No. 1 Pope, 660 ft. S and E line, sec. 20, King Farm Lots. D.S.T. 5,340-51 ft.; 12-min.: 175 lbs. W.P.; 120 ft. P.L.O. and 390 ft. oil cut with mud, set csg. 5,340 ft.; drlg. plugs.

Stanolind O. & G. Co. No. 1 Frame & Bowers, 330 ft. S & E lines, sec. 14. Drlg. 5,207 ft.

Stanolind O. & G. Co. No. 1 Sain, 330 ft. S and W lines, sec. 18. T.D. 5,850 ft.; P.B. 4,335 ft.; tested wtr. and mud.

Stanolind O. & G. Co. No. 1 Thompson, 330 ft. N and W lines, NE¼ sec. 4. D.S.T. 5,337-5,405 ft.; 125 ft. mud and show of oil in 15 min. on ¼-in. ck.; prep. test 5,390-5,405 ft.

Texon and Lucey No. 1 Dodd, 330 ft. S and E lines, sec. 15, R. King Farm Lots Subd. T.D. 6,500 ft.; P.B.; comp. gasser 4,000 ft.; pressure 1,400 lbs.

Lucas—Live Oak County

Houston Oil Co. No. 35 Cartwright, 800 ft. NE R.R., 2,440 ft. NW No. 33. Set 9⅝-in. csg. 2,276 ft.

Calliham—McMullen County

Comet Oil Co. No. 1 Lark, 150 ft. S and W lines, Blk. H. Scrugham Sur. Drlg. 354 ft.

Lightfoot Oil Co. No. 4 Lark, Blk. 118. Scrugham Sur. D.&A. 1,058 ft.

Loma Oil Co. No. 3-F Jacob, 660 ft. W of No. 1, Jacob Sur. M.I.M.

Rhode—McMullen County

Humble O. & R. Co. No. 2 Rhode, 330 ft. S and W lines, Sur. 17. Drlg. sh. 1,-147 ft.

Agua Dulce—Nueces County

Parker, Foran & Knode No. 1 J. G. Ingram, sec. 9, Ross Peters Subd. No. 2. Drlg. 2,056 ft.

Texon Royalty Co. No. 1 Elliff, 466 ft. E line, 2,194 ft. S line tr., Longorio grant. Drlg. 4,729 ft.

Saxet Heights—Nueces County

Callaham Oil Co. No. 1 Best, 5-ac. tr., Ehlers Garden Tracts. Drlg. 2,357 ft.

Capitol Oil Co. No. 1 Corpus Christi Ind. School Dist., Fairview School Survey. Set csg. 4,088 ft.; perf. 4,085-88 ft.; rng. screen and lnr.

Circle Oil Co. No. 2 Pete Whelan, 330 ft. N line, 225 ft. E and W lines, 53.7-ac. tr. Drlg. 3,137 ft.

J. K. Culton No. 3 Cantwell, 1,295 ft. S line, mid E and W lines, 27.5-ac. tr., Metes & Bounds Sur. Comp. 142 B.P.D., 5/32-in. ck.; Sd. 4,066-76 ft.

J. K. Culton No. 1 Tribble, 225 ft. S line, midway E and W lines, 17.54-ac. tr. Set sur. csg.; W.O.C.

A. C. Erwin No. 3 fee, Cen. Blk. 1, Oak Park Addn. Sd. 4,057-96 ft.; comp. 300 B.P.D. on ¼-in. ck.

Federal Oil Co. No. 1 C. R. Priour, cen. Blk. 15, Oak Park Addn. M.I.M.

Tom Graham No. 1 Haug, Lots 6 and 7, Ellendale Gardens No. 2. Drlg. plugs; T.D. 4,086 ft. Comp. gasser. Recementing.

Houston Oil Co. No. 1 McBride, 94.98-ac. tr., Villareal Sur. T.D. 4,096 ft.; sd. 4,091-96 ft.; tested S.W.; D.&A.

Marine Oil Co. No. 2 Geistman, 250 ft. NE line, 185 ft. NW line, 9.63-ac. tr. Drlg. 3,512 ft.

Maryland Oil Co. No. 1 Villa Gardens, Blk. 12, Villa Gardens Subd. Perf. 4,078-84 ft.

Morgan Bros., Inc., No. 1 Bender, cen. .75-ac. tr., Blk. D, Harbor View Addn. Set surf. csg.; W.O.C.

Morgan Bros., Inc., No. 1 Dodson, cen. ½-ac. tr., Blk. 12, Bancroft Farm Lots. Drk.

W. N. Paul No. 1 Shallert, Blk. "D," Harbor View Addn. Spd.; set sur. csg. 502 ft.; W.O.C.

Pedernal Oil Co. No. 1 Pondrom, Lot 11. Country Club Place. Cg. 4,076 ft.

Port Oil & Gas Co. No. 2 Sherman, Lots 26 and 27, Country Club Place Addn. Drlg. 2,249 ft.

J. D. Proctor No. 1 Simonton, 100 ft. E line, 68 ft. N line, 1-ac. tr., Lots 46 and 47, Country Club Place. Drk.

Renwar Oil Corp. No. 1 Guaranty Title & Trust Co., Lot 9, Blk. 12, Villa Gardens. Perf. 4,084-86 ft.; swbg. ln.

Renwar Oil Co. and Maryland Corp. No. 1 Kaler, Villareal Sur. Drlg. sh. 3,-819 ft. (cor.).

W. A. Richardson No. 2 Edwards, 10-ac. tr., Villareal Sur. Drk.

Richardson Petroleum Co. No. 1 Priour, Lot 1, Oak Park Addn. Sd. 4,068-97 ft.; rng. csg.

Saxet Prod. Co. No. 2 Uehlinger, 303 ft. S line, 181 ft. E line, 10-ac. tr. Set sur. csg. 500 ft.; W.O.C.

Taylor Ref. Co. No. 3 Corpus Christi Golf & Country Club 73-ac. tr. Skidding on.

Taylor Pet. Co. No. 2 Dunn, 330 ft. W line, 230 ft. S line, 53-ac. tr. Set sur-csg. 500 ft.; W.O.C.

Taylor Ref. Co. No. 1 fee, 990 ft. S line, mid E and W lines, 10-ac. tr. Sd. 4,071-78 ft.; set csg.; W.O.C.

Winn Drlg. Co. No. 1 Starr, 125 ft. NW line, 150 ft. SW line, 3.39-ac. tr., Blk 11, Bancroft Farm Lots. Top sd. 4,068 ft.; set csg. 4,077 ft.; Stdg.

Saxet—Nueces County

W. W. Chapman No. 2 Morgan, 660 ft. W No. 1 Morgan, 322-ac. tr., Sur. 405. Drlg. 5,123 ft.

W. W. Chapman No. 1 M. B. Humphrey, 330 ft. N & W lines, 20-ac. tr., J. W Stevens Sur. 406. Top sd. 5,807 ft.; cg. 5,811 ft.

Coastland Oil Co. No. 1 Page Bros. (workover). Sd. 5,741-58 ft.; comp. 10 to 15 bbls. of dist. per day on 5/32-in. ck.; T.P. 2,150 lbs.

Conroe Drlg. Co. No. 2 Frank Bliss, J. W. Stevens Sur. 406. Sd. 5,803-30 ft.; comp. 400 B.P.D. on 3/16-in. ck.

Conroe Drlg. Co. No. 3 Bliss, 330 ft. N and W lines, 105-ac. tr., Stevens Sur. Pltg.

Conroe Drlg. Co. No. 5 Bliss, 330 ft. N line, 1,085 ft. W line, 105-ac. tr., Stevens Sur. R.U.

Conroe Drlg. Co. No. 1-A Rand Morgan, 990 ft. E line, 330 ft. N line, Sur. 403. Sd. 5,811-17 ft.; tested 2 joints mud and gaso. in 3 min.

Conroe Drlg. Co. No. 1-B Rand Morgan, 330 ft. N line, 990 ft. E line lease, Sur 403. T.D. 6,518 ft.; stdg.

Conroe Drilling Co. No. 1-C Rand Morgan, 990 ft. E line, 330 ft. N line, lease, Sur. 403. Set sur. csg.; W.O.C.

Gilcrease Oil Co. No. 1 Sullivan, 330 ft. N and E lines, 140.13-ac. tr., Thos. Gallager Sur. D.S.T. 4,442-48 ft.; 1,750 ft. P. L. oil in 15 min.; set csg. 4,441 ft.; W.O.C.

L. Glasscock No. 1 Glover Johns, W. S. McGregor Sur. 582. Sd. 5,807-17 ft.; comp. est. 200 B.P.D. on 9/64-in. ck.

Great States Oil Co. No. 2 Humphreys, 988 ft. W line, 330 ft. S line, Stevens Sur. 406. Location.

Houston Oil Co. No. 1-A fee, 330 ft. S and E lines of tract. Drk.

Morgan Gulf Oil Co. No. 1-C Morgan, 330 ft. S and E lines, 160-ac. tr., B.S.&F. Sur. 405. Set sur. csg. 1,000 ft.; W.O.C.

North Star Oil Co. No. 2 Humphrey, 990 ft. N and W lines, 109-ac. tr., Stevens Sur. 406. Drlg. 5,317 ft.

North Star Oil Co. No. 4 Rand Morgan, 330 ft. N and E lines lease, Sur. 405. M.I.M.

North Star Oil Co. No. 8 Rand Morgan 330 ft. S and W lines lease, Sur. 405. M.I.M.

Southern Minerals Corp. No. 8 Bliss, 120-ac. tr., J. W. Stevens Sur. 406. M.I.M.

Southern Minerals Corp. No. 3 Mastin, 990 ft. S line, 330 ft. E line, 125-ac. tr., G. Frank Sur. 416. Skdg. on.

A. F. Holliday No. 4 Griffith, 330 ft. N line, 1,047 ft. W No. 3, Franks Sur. 416. No report.

A. F. Holliday No. 4 Hutchins-Stillwell, 330 ft. S and W lines, Blk. 30, Sheppard Farm Lands. Sd. 5,818-30 ft.; comp., no gauge.

A. F. Holliday No. 3 Hutchins, sec. 30. Sd. 5,849-64 ft.; set csg.; W.O.C.

Houston Oil Co. No. 4 Harrell, Blk. 19, Sheppard Farm Lots. Set 7-in. csg. 4,-554 ft.; sd. 4,543-50 ft.

Houston Oil Co. No. 1 McGregor, 800 ft. N line, 1,450 ft. W line, Sur. 311. (Workover). Deepening 5,172 ft.

Frank Jones No. 1 Carson, 330 ft. N line, 800 ft. E line, Sur. 500 (old Viola No. 1) workover. T.D. 4,902 ft.; cd. sd. 5,827-30 ft.; T.D. 5,843 ft.; wtr. sd.; S.D. orders.

Mills Bennett Prod. Co. No. 1 Ordner, 330 ft. S and E lines, 210-ac. tr., Sur. 410. Sd. 5,508-18 ft.; D.S.T. showed 170 ft. oil cut with mud; seat failed; testing further; sd. 5,508-20 ft.

Morgan Gulf Oil Co. and Great States Oil Co. No. 1 Humphreys, 330 ft. S line, 990 ft. W line, Stevens Sur. 406. Sd. 5,-812-22 ft.; comp. 276 B.P.D.

North Star Oil Co. No. 2 Bliss, 990 ft. N & W lines, 109-ac. tr., Stevens Sur. 406. Drlg. 3,635 ft.

North Star Oil Co. No. 2 Rand Morgan, 330 ft. S line, 1,650 ft. E line, B.S.&F. Sur. 405. Sd. 5,789-5,833 ft.; completing.

North Star Oil Co. & Morgan Gulf Oil Co. No. 1-G Rand Morgan, 990 ft. N line, 250 ft. E line, Sur. 403. Drlg. 457 ft.

North Star Oil Co. No. 2-G Rand Morgan, 910 ft. E line, 330 ft. N line, B.S. &F. Sur. 403. Set surf. csg. 1,000 ft.; W.O.C.

Phillips Pet. Co. No. 3 Hutchins, 330 ft. N and W lines, Blk. 19, Sheppard Farm Lots. Sd. 5,805-26 ft.; comp. 144 B.P.D. on ¼-in. ck.

Phillips Pet. Co. (Paul Benedum) No. 2 Morgan, Sur. 405 (old Gibson O. & G. Co. test). T.S. 5,786 ft.; D.S.T. 5,816-26 ft.; 600 ft. P.L.O.; 3 min.; reworking; T.D. 5,829 ft.

W. A. Richardson No. 1 W. S. Hutchins (workover), 330 ft. S and E lines, 80-ac. tr., Sh. 2, Frank Sur. 416 Sd. 5,881-98 ft. Tested s. w. W.O. orders.

Richardson Petroleum Co. No. 4 Perkins & LaGasse, 330 ft. W lines, 296 ft. N line, Blk. 26, Sheppard Farm Lots, Sur. 406. Drlg. 5,036 ft.

Richardson Petroleum Co. No. 3 Quiros, 660 ft. E of No. 2. Drlg. 4,093 ft.

Shell Pet. Corp. No. 3 Flato, 330 ft. E and S lines lease, 40-ac. tr., I. Dunn Sur. Sd. 4,543-48 ft.; comp. 163 B.P.D. on 5/32-in. ck.

Sinclair Prairie Oil Co. No. 2 Isensee, 330 ft. S and E lines, 80-ac. tr., C. Land Sur. 404. T.D. 4,960 ft.; rng. Schlumberger test.

Southern Minerals Corp. No. 5 Bliss, S offset Conroe No. 1 Bliss. Sd. 5,814-30 ft.; set csg. 5,820 ft.; W.O.C.

Southern Minerals Corp. No. 6 Bliss, S offset Holliday No. 2 Griffith. Sd. 5,817-30 ft.; set csg. 5,820 ft.; drlg. plugs.

Southern Minerals Corp. No. 7 Bliss, 330 ft. S and W lines tr., Stevens Sur. Drlg. 2,516 ft.

Southern Minerals Corp. No. 5 Isensee, 330 ft. N and W lines tr., Sur. 404. Drlg. 3,527 ft.

Southern Minerals Corp. No. 2 Mastin, 125-ac. tr., G. Frank Sur. 416. Sd. 5,748-60 ft.; set csg. and perf. 5,751-55 ft.; comp.; no gauge.

Southern Minerals Corp. No. 7 Smith, 330 ft. S and E lines, 120-ac. tr., Blk. 4, Sheppard Farm Lots. Set csg. 4,417 ft.; W.O.C.

Texon Drilling Co. No. 2 Isensee, 150 ft. N line, 112 ft. W line, 13.44-ac. tr., C. Land Sur. 404. Spudded.

Texon Drlg. Co. No. 3 Lingnau, 150 ft. N line, 112 ft. W line, 13.44-ac. tr., C. Land Sur. No report.

Texon Drlg. Co. No. 1 Scoggins, 125 ft. N line, 330 ft. W line lse., C.G.&S.F. Sur. 315. Cg. sd. 4,416 ft.

W. A. R. Oil Co. No. 1 Hutchins, 80-ac. tr., Sh. 2, Frank Sur. 416 (old Capps No. 1, workover). Sd. 5,881-98 ft., s.w. S.D. W.O. orders.

Warner Quinlan Co. No. 4 Isensee, Blk. 1, Sheppard Farm Lots. Drlg. 1,315 ft.

Wynne Drlg. Co. No. 1 Rand Morgan, 1,650 ft. N line, 330 ft. W line, 235.5-ac. tr., Sur. 315. Set sur. csg. 990 ft. W.O.C.

Plymouth—San Patricio County

Centennial Oil Co. No. 1 State of Texas, Tr. 2. Set 64 ft. conductor csg.; W.O.C.

Centennial Oil Co. No. 1 State of Texas, Tr. 3. M.I.M.

Centennial Oil Co. No. 2 State of Texas, Tract 3, 640 ft. S and 46 deg., 51 min. E of Plymouth O. Co. No. 23-C Welder. Drlg. 4,484 ft.

Plymouth Oil Co. No. 50-C Welder, 526 ft. S line, 1,427 ft. W line, sec. 50. Testing 5,872-81 ft.

Plymouth Oil Co. No. 51-C Welder, 1,169 ft. N line, 256 ft. E line, sec. 49. Set csg. 5,480 ft.; W.O.C.

Plymouth Oil Co. No. 52-C Welder, 280 ft. N line, 1,188 ft. E line, sec. 49. Drlg. 5,512 ft.

Sun Oil Co. No. 3 Edgar, 466 ft. E line, 446 ft. N line lse., Blk. 1, sec. 34. Drlg. 5,217 ft.

Sun Oil Co. No. 1 Rosen, 466 ft. N line, 315 ft. W line tr., E½ W½ sec. 35, J. Fessenden Sur. Rebldg. drk.; T.D. 387 ft.

Taft Field—San Patricio County

Humble O. & R. Co. No. 3 Mayo, Tabor Sur. Sd. 5,919-34 ft.; comp. 6 B.P.H. on ¼-in. ck.

Humble O. & R. Co. No. 4 Mayo, Tabor Sur. M.I. Rig.

Shell Pet. Corp. No. 2 Pullin, 705 ft. N line, 493 ft. E line lease, Blk. 4, 2nd Addn. Sd. 3,972-90 ft.; comp. 83 B.P.D. on ½-in. ck.

Guerra—Starr County

Sun Oil Co. No. 11-A Guerra, 3,077 ft. SE line, 3,860 ft. SW line, Sh. H-14-B, Las Cuevitas gr. Set csg. 190 ft.; drlg. plugs.

Rio Grande City—Starr County

Moss & Bass No. 1 Frank Doyno, Blk. 3, Tr. 77-A. Set csg. on sd. 1,412-22 ft.; drlg. plugs.

Sioux Oil Corp. No. 3 Frank Doyno, 150 ft. N and W lines, Blk. 3, Tr. 77-A, Porc. 81. M.I.M.

Fech Oil Co. No. 10 Frank Doyno, Blk. 4, Tr. 77-A, Porc. 81. Set csg. 1,453 ft.; W.O.C.

Samfordyce—Starr County

Sun Oil Co. No. 1 Garcia Land & Cattle Co., 330 ft. S and W lines, 200-ac. tr., W½, Porc. 100. Drlg. sh. 1,787 ft.

Lopez—Webb-Duval Counties

Gem Oil Co. No. 1 Peal, Sur. 72. Loc.

Magnolia Pet. Co. No. 2 Peal, 660 ft. N of No. 1, Sur. 383. Sd. 2,099-2,106 ft.; comp. 10,000,000 ft. gas and 50 bls. of oil.

Magnolia Pet. Co. No. 3 Peal, 660 ft. S No. 1, Sur. 72. Loc.

Mills Bennett Prod. Co. No. 8 Valades, 59 ft. N line, 2,310 ft. W line, Sur. 111. Comp. 18 B.P.H. jetting; sd. 2,232-35 ft.

Mills Bennett Prod. Co. No. 12 Valades, 601 ft. S line, 2,310 ft. W line, Sur. 114. M.I.M.

Mortimer & Springer No. 2 F. L. Garcia, Sur. 112. Drlg. 2,057 ft.

Mortimer & Springer No. 2 J. Lopez, Sur. 73. Comp. est. 20 B.P.H. jetting; sd. 2,-163½-82 ft.

Mortimer & Springer No. 1 Peal, Sur. 72. Location.

Starr Dev. Co. No. 1 Peal, Sur. 796. Drlg. 620 ft.

Superior Oil Co. No. 10 Billings, Sur. 109. T.D. 2,259 ft.; swbg.

Superior Oil Co. No. 11 Billings, Sur. 109. Spudded.

O'Hern—Webb County

Magnolia Pet. Co. No. 9. Servando Benavides, C Lot 6, Blk. 174. T.D. 2,836 ft.; comp. 6 B.P.H. on ¼-in. ck.

T. S. Reed No. 5 Benavides, Blk. 363. Comp. 3 B.P.H.; T.D. 2,948 ft.

Escobas—Zapata County

Starr Dev. Co. No. 1 S. Benavides, 330 ft. N and W lines, Sur. 172. M.I.M.

Texas Co. No. 91 Whitehead, 629 ft. NE of No. 79. 629 ft. SE of No. 81, Cerrito Blanco gr. Drlg. sh. 1,088 ft.

Haynes—Zapata County

Geo. Buck No. 2 Haynes, Blk. 4, Haynes Subd., Villa & Comitas gr. M.I.M.

McKay & Upchurch No. 5 Haynes, Blk. 7, Haynes Subd., Villa & Comitas gr. Drlg. 214 ft.

WEST TEXAS WILDCATS

Brewster County

F. C. Dodson No. 1 Texas American Synd., sec. 66, Blk. 10, G.H.&S.A. Sur. U.R. csg.; T.D. 2,223 ft.

Cochran County

Cascade and Honolulu Oil Corp. No. 1 E. B. Duggan, cen. Labour 13, League 55,

Oldham County Sch. Land. T.D. 232 ft.; rigging up rotary.

Concho County

J. W. Westbrook No. 1 Ledbetter. Drlg 2,662 ft.

Crane County

Gulf Oil Corp. No. 2 W. N. Waddell, sec. 18, Blk. B-21. Drlg. 4,100 ft.

Gulf Oil Corp. No. 2 Tubbs, sec. 12, Blk. 27-B. Fsg. 3,940 ft.

Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. Drlg. 322 ft.

Loffland Bros. No. 2 Tubbs, sec. 9, B-27. Drlg. 1,766 ft.

J. E. Lucas No. 1 Pershing, sec. 1, Blk. 31, H.&T.C. Sur. R.U. mch.

Moore Bros. No. 1 Barnsley, sec. 43, Blk. 32, P.S.L. Sur. Drlg. 4,967 ft.

Rider et al No. 1 Thaxton, sec. 2, W. L. Wilkenson Sur. Spudded and S.D.

Crockett County

John I. Moore No. 1 A. C. Hoover, sec. 4, Blk. FF, B.&B. Sur. S.D. 1,255 ft.

Ector County

Grisham-Hunter Corp. No. 1 R. B. Cowden, C of SE¼, sec. 10, Blk. 45, Twp. 2n, T.&P. Sur. Drlg. 1,812 ft.

Fisher County

L. A. Daniels et al No. 1 J. J. Nickless. Fsg. 553 ft.

Ellis & Eubanks No. 1 C. C. Wourland, sec. 15, Blk. 21, T.&P. Sur. Drlg. 1,700 ft.

Forest Dev. Co. No. 1 A. M. Dry, sec. 108, Blk. 2, H.&T.C. Sur. T.D. 3,544 ft.; U.R. csg.

Gaines County

Humble O. & R. Co. No. 1 W. Eubanks, 660 ft. S and W, sec. 6, Blk. AX. Top anhydrite 1,790 ft.; top salt 1,824 ft.; drlg. 2,424 ft.

Landreth Prod. Co. No. 1 Kirk, sec. 22, A-21. T.D. 4,820 ft.; swabbed 107 bbls. in 24 hrs; temporarily completed.

Garza County

Brown Eagle Oil Co. No. 1 Sullivan, sec. 3, S. C. Harper Sur., Blk. H. Drlg. 2,374 ft.

M. L. Richards No. 1 U. U. Post est., sec. 1,232, D. L. Phillips Sur. Drlg. 1,606 ft.

Glasscock County

F. Dodson et al No. 1 Carter heirs, 330 ft. from S and W, sec. 8, Blk. 33, Twp. 3s, T.&P. Sur. Spudded.

Hudspeth County

Hayman Krupp Oil & Land Co. No. 1 Thaxton, sec. 34, Blk. 74, Twp. 6, T.&I Sur. T.D. 1,131 ft.; U.R. csg.

Jeff Davis County

C. M. Joiner No. 1 Jones & Coffield, sec. 8, Blk. 2, H.&T.C. Sur. S.D. 4,340 ft.

Jones County

Consolidated Oil Co. No. 1 Hamilton, sec. 21, Blk. 4, H.&T.C. Sur. Drlg. 2,031 ft.

Dobbs Oil Co. No. 1 McCreight, sec. 14, O.A.L. Sur. Drlg. 943 ft.

Owens-Snebold Oil Corp. No. 1 S. Gorman, 300 ft. from S and 200 ft. from W, sec. 5, Blk. 6, W. C. Walker Sur. Spudded.

Parker No. 1 C. L. Brown, sec. 9, Blk. 2, T.&N.O. Sur. T.D. 2,132 ft.

Kimble County

Wilcox O. & G. Co. No. 1 H. Spiller, sec. 15, Brooks & Burleson Sur., Abst. 80. Derrick.

Loving County

Evans No. 1 Johnson. Wtr. shut-off; T.D. 3,214 ft. Swabbed and S.D.

Pecos County

Dobbs Oil Co. No. 1 Rooney, sec. 12, Blk 125, T.&St.L. Sur. El. 3,005 ft.; S.D. 2,188 ft.

E. R. Minshall, No. 1 Banker, sec. 25, Blk. 146, T.&St.L. Sur. Drlg. 1,037 ft.

S. Thompson No. 1 Elsinore Cattle Co. sec. 54, Blk. D, G.C.&S.F. Sur. Drlg. 1,500 ft.

Presidio County

Linderman Bros. Oil Corp. No. 1 J. R. Bledsoe & Badgley, sec. 15, Blk. 351, G.C.&S.F. R.R. Co. Sur., 2½ mil. NE of Presidio. Drlg. 1,683 ft.

Schleicher County

Cardinal Oil Co. et al No. 1 J. A. Whitten, sec. 35, Blk. LL, T.C.R.R. Sur. S.W. 4,565 ft.; S.D. 4,886 ft.

Mangus Oil Co. No. 1 Judkins & Spencer, C SW¼ sec. 4, W. W. Russell, grantee. Elev. 2,309 ft.; S.G. 4,350 ft.; gas sd. 4,956-58 ft.; T.D. 6,527 ft.; P.B. to 5,912 ft.; to acidize.

Taylor County

Geo. Callahan No. 1 S. J. Writer. T.D. 2,035 ft.; swedging csg.

A. R. Forrester No. 1 O. A. Prescher, sec. 14, Blk. 86, J. R. Shipman Sur. Drlg. 539 ft.

Terry County

J. A. Estes No. 1 F. B. Graham, sec. 23, Blk. T, O.&W.R.R. Machine.

Tom Green County

Spinner No. 1 Reed, Sub. 39, Mason & Perry Sur. Drlg. 2,300 ft.

E. B. Webb No. 1 D. B. Horn, sec. 137, Washington Co. R.R. Sur. Spudded.

Upton County

P. Fox No. 1 Cordova Union, sec. 17, Blk. 1, M.K.&T. Sur. Drlg. 1,403 ft.

G. P. McCamey No. 1 Cordova Union, sec. 19, Blk. 1, M.K.&T. Sur. Drlg. 1,449 ft.

Perry & Breeding No. 1 Cordiva-Union, sec. 1, M. Huggins Sur. T.D. 2,295 ft.; P.B. 2,282 ft.

Ward County

Gulf Oil Corp. No. 1 W. A. Estes, sec. 38, Blk. 34, H.&T.C. Sur. T.D. 2,475 ft.; C.O.

P. Moran et al No. 1 Reynolds, sec. 12, Blk. 5, H.&T.C. Sur. S.D. 850 ft.

Winkler County

Herbert Oil Co. No. 1 I. Hendrick, sec. 14, Blk. 26, S.D. 3,031 ft.; to shoot.

Fred Hyer No. 1 Evans, sec. 8, Blk. 58. Drlg. 4,776 ft.

Joiner No. 1 Evans, sec. 46, Blk. 73, P.S.L. Sur. Drlg. 4,539 ft.

Navarro Oil Co. No. 1 Drane, tr., sec. 35, Blk. 26, P.S.L. Sur. S.D. 2,779 ft.

Read & Duffey No. 1 Sealey, sec. 8, Blk. A, G.M.M.B.&A. Sur. Spudded.

Yoakum County

Bahan et al No. 1 Henard, C SW ¼, sec. 367, Blk. D, J. H. Gibson Sur. El. 3,691 ft.; Yates 3,090 ft.; drlg. 3,278 ft.

Stogner et al No. 1 Roosevelt, sec. 215, Blk. D, John H. Gibson Sur. El. 3,712 ft.; top anhydrite 2,397 ft.; T.D. 2,401 ft.; standardizing.

E. C. TEXAS WILDCATS

Anderson County

Gulf Oil Corp. No. 1 Ross, Robt. Irwin Sur. T.D. 6,478 ft.; pipe stuck at 3,437 ft.

Angelina County

Bill La Rue No. 1 Cameron Lbr. Co., I. Ray Sur. T.D. 1,354 ft., wtr. sd.; S.D.

Ginter et al No. 1 Cope hrs., Jose Moron Sur., 3 mi. E of Dibol. S.D. 2,030 ft.

W. A. Stone et al 1 Southern Pine Lbr. Co., B. J. Thompson Sur., 8 mi. SE Lufkin; R.U.

Cherokee County

T. J. Wood et al No. 1 Huggins, L. Jordan Sur., 2 mi. SW of discovery, or 7 mi. SW of Rusk. T.S. 5,182 ft.; T.D. 5,186 ft.; set csg.; flwd. oil, mud and S.W.; comp.; no gauge.

Franklin County

E. Bateman et al No. 1-E Phillips, 150 ft. from N and W of N 38½ acres of 77-ac. tract, Wm. Birdwell Sur., 4 mi. SW Talco. D.S. test 4,282-4,343 ft.; showed 1,100 ft. fluid with oil; no water; rung csg.

J. B. Bond et al No. 2 Sanders, W. F. Dyer Sur. T.D. 4,344 ft., black asphaltic sd.; top Paluxy 4,198 ft.; 4,215-20 ft., br. sd. with sat.; Schlumberger showed sat. sd. 4,334-44 ft., heavy black asphaltic sat. sd. (dead oil); 5½-in. 4,190 ft.; W.O.C.

J. DeGrazer et al No. 1 F. N. Bates F. M. Bates Sur. Began 6-27-36; T.D. 108 ft.; W.O.C.; el. 356 ft.

Straube & Straube No. 1 B. Norman. 330 ft. N and E of E½ of 255.53-ac. tract, M.E.P.&P. Sur. Drk.

Freestone County

Tom Sharp et al No. 1 E. E. Lamb. Jas. Sparks Sur., 3 mi. SE of Streetman. T.D. 3,378 ft., S.W. sd.; top Woodbine 3,340 ft.; top sd. 3,374 ft.; S.D.

Grayson County

Olson Drlg. Co. No. 1 Southwestern Life Ins. Co., J. C. Jamison Sur., 6 miles NW of Denison. Elev. 767 ft.; set whipstock at 5,405 ft.

Henderson County

McDougal et al No. 1 E. Price, M. Mathews Sur., 4 mi. S of Trinidad. R.U.

Hopkins County

D. Hager et al No. 1 J. Worshorn, A. Whitmore Sur. T.D. 4,500 ft., sh. and sd.; cored 4,465-75 ft.; rec. 2 ft. sdy. sh., 8 ft. sat. sd.; 4,475-87 ft., 12 ft. oil sd.; 4,487-4,500 ft., 3 ft. sdy. sh. showing oil, 4 ft. limey sh.

Kaufman County

Lester & Duffield No. 1 D. C. Baron, J. T. Taylor Sur., 3 mi. NE of Elmo. Attempting to straighten crooked hole; T.D. 3,720 ft.; P.B. 2,900 ft.

Lamar County

Abercrombie & Harrison No. 1 C. M. Terrell, 200 ft. out of NW cor. of 220-ac. tr., 4½ mi. SE of Paris. Drk.

Limestone County

E. H. Daugherty No. 1 S. Welch A. S.D.; T.D. 2,158 ft.

C. L. Lytle No. 1 J. L. Thompson, F. Varella Sur., Mexia field. T.D. 6,054 ft.; P.B. 5,880 ft.; S.D.

Red River County

Abercrombie-Harrison No. 1 Temple Lbr. Co., D. D. Bruton Sur., 10 mi. NE of Clarksville. Top sd. 2,104 ft.; top Paluxy 1,057-59 ft.; fsg. 2,294 ft.

Williams et al No. 1 L. and O. Roberts, James Bankston Sur., 2 miles NE of Annona. Elev. 396 ft.; S.D. 726 ft.

Rusk County

D'Arman et al No. 1 R. E. Talliferro, T. L. Wilkshire, 5 mi. W of Henderson, D.&A.

McCallum et al No. 1 E. C. Gary, John Piburn Sur., 5 mi. S of Henderson. Elev. 338 ft.; comp.; D.&A.; T.D. 3,750 ft.

Pure Oil Co. No. 1 W. H. Faulkner, Wm. Elliott Sur., S of Concord. Elev. 563 ft.; coring 7,471 ft., hd. sd.; top Travis Peak 7,323 ft.

Titus County

Jule Alford No. 2 Fry, I. P. Stern Sur., 1,313 ft. N of No. 1. D.&A.

Dean & Atkisson No. 1 A. Cornelius, Delgado Sur. Changed to Red Iron Drlg. Co. T.D. 4,170 ft.; 5½-in. set 4,147 ft.; W.O.C.

Hollingsworth Drlg. Co. No. 1 A. O. Brown, cen. Lot 1, Blk. 41, Delgado Sur. Top Paluxy 4,170 ft.; comp.

Jones & Shelburne No. 1 Hazelwood, Stern Sur. Top Paluxy 4,284 ft.; S.D. 4,351 ft.; T.D. 4,351 ft.; 5½-in. 4,273 ft.; 3,400 ft. S.W. in hole with small amount oil; S.D.W.D.

Magnolia Pet. Co. No. 1 L. Blackburn, Benj. Jones Sur., 2½ mi. E of Talco. Drlg. shale 1,850 ft.

Nivia Oil Co. No. 1 J. N. Kelley, J. Holman Sur. T.D. 4,360 ft.; 2,000 ft. oil in hole; W.O.S.R.

A. M. Peairs No. 1 L. Sanders, C of Lot 1, Blk. 30, Talco townsite. T.D. 4,350 ft., sd.; flowing 25 bbls. hr., 2-in. tubg.

Stroube & Stroube No. 1 S. E. Strutton, 370 ft. N and C of E. and W lines of 50-ac. tract, M.E.P.&P. Sur., 6 mi. E of Talco. Began 6-24-36; 10-in. 220 ft.; T.P. 1,711-1,880 ft.; drlg. 2,894 ft., lime and sh.; elev. 341 ft.

Tide Water Oil Co. No. 1 Carr, M. V. Delgado Sur. Elev. 358 ft.; comp.; T.D. 4,340 ft., hd. sdy La; comp. 6-19-36; 43 bbls. hr., 2½-in. tubg.

EAST TEXAS

(Border Counties)

Bowie County

Fay T. Chew et al No. 1 Barkman, John Parkman Sur. Sur. pipe set; W.O.C.S.

Ferguson & Hill No. 1 A. Y. Breckenridge, N. Dycas Sur. 10-in. set 60 ft.; W.O.C.S.

Westmount Oil Co. No. 1 Phillips, J. W. Hancock Sur. T.D. 4,300 ft.; no shows; abd.

Westmount Oil Co. No. 1 R. N. Phillips, G. N. Hancock Sur., 10 mi. N of Oak Grove. Base Georgetown 1,924 ft.; top Paluxy 1,924 ft.

Cass County

American Liberty Oil Co. No. 4 Maxie, John Collum Sur. Comp.; flw. 40 B.P.H.; ½-in. tbg. ck.; T.D. 6,006 ft.; 5-in. 5,972 ft.

American Liberty Oil Co. No. 1 G. Stephens, 330 ft. N and 1,020 ft. E. SW cor. J. Garsner Sur. Drlg. 150 ft.

W. F. Lacy et al No. 1 Baugus, J. H. Rives Sur. 16-in. 258 ft.; drlg. 5,158 ft.

Lide, Greer & Brown No. 1 Baugus, 150 ft. N and E, from NE cor. Lot 12 in J. H. Rives Sur. Drk.

Marathon Oil Co. No. 1 R. P. Willis, S.F. I.W. Sur. Drlg. 5,464 ft.

R. W. Norton No. 1 W. M. Hall, 330 ft. S and 697 ft. W, NE cor. 100 acs., W. Robinson Sur. No. 907. Drlg. 5,184 ft.

R. W. Norton No. 1 A. S. Hall, 334 ft. S and 2,091 ft. E, NW cor. 160 acs., James Young Sur. T.D. 6,075 ft.; tstg.

R. W. Norton No. 3 Haywood, on Priscilla Evans Sur. Drlg. 4,860 ft.

R. W. Norton No. 2 Mary Rives, John Collom Sur. Cg. 6,003 ft.

Showers & Monerief Co. No. 1 Stallcup, J. Davenport Sur. Drlg. 5,381 ft.

Superior Oil Co. No. 1 Stallcup, 330 ft. N of S line and middle E and W of 20 ac., Robert Trammel Sur. T.D. 6,050 ft.; rng. 7-in.

Superior Oil Co. of Calif. No. 2 Stallcup, Robt. Trammel Sur. R.U.

United Gas Pub. Ser. Co. No. 1 L. J. Cunningham, W. Robinson Sur. Comp.; flw. 30 B.P.H.; ½-in. tbg. ck.; T.D. 6,123 ft.

United Prod. Corp. No. 2 E. J. Cunningham, on Wilson Robinson Sur. Drlg. 5,260 ft.

United Prod. Corp. No. 2 E. Tyson Unit, J. H. Rives Sur. Drlg. 5,068 ft.

United Gas Pub. Ser. Co. No. 2 F. S. Simpson, 2,091 ft. E and 334 ft. N, SW cor. of 160 ac., James Young Sur. Drlg. 6,028 ft.

United No. 1-A E. Tyson Unit, J. H. Rives Sur. T.D. 6,065 ft.; set 7-in.; W.O.C.S.

Harrison County

W. F. Bridewell et al No. 1 Clapp, F. C. Baker Sur. T.D. 2,412 ft.; acid 2,000 gals.; swbd. S.W. only; S.D.O.; may D.D.

Panola County

Logansport P. L. Corp. No. 1 Rushing, M. Smith Sur. D.S.T. showed 200 ft. mud; will core ahead.

Shelby County

H. A. Stebbinger et al No. 1 Pickering Lbr. Co., C. E. Henry Sur. O.W.D.D.; drlg. 4,358 ft.

F. E. Mulroy et al No. 1 C. A. Hayden, in the D.T.F. York Sur. R.U.

NORTH TEXAS WILDCATS

Archer County

"Bob" Burns No. 1 Mrs. M. E. Durham, sec. 52, Harris Subd. Loc.

Deaton & Gass No. 1 Hawkins, sec. 22, H.&T.C. Sur. R.U.S.T.

G. E. Gehringer No. 1 J. J. Perkins, J. Poitevent Sur. A-247. Loc.

Kemp & Waggoner No. 1 Wilson, Blk. 75, A.T.N.C.L. Cem. 6⅝-in csg. 2,190 ft.; sd. 2,205-20 ft.; C.O. and testing.

J. T. Miller No. 1 Rogers, T.E.&L. 2,407. Drlg. 1,400 ft.

Cooke County

Jas. L. Anderson No. 1 Bruhlmeyer, H. Strong A-930. Testing.

Anderson & Kerr No. 1 Will McKemie, A. C. C. Bailey A-44. Drlg. 1,860 ft.

J. G. Beard et al No. 1 R. S. Rose, T. E. Hardeway A-464. Testing est. 1,000 bbls. per day.

Benton & Holmes No. 1 T. Hildebrand, B. B. Lee Sur. A-614. R.U.R.

Fain-McGaha No. 1 J. W. Mount, sec. 9, S.P.R.R. S.D. 1,737 ft.

B. H. Hilburn No. 1 Hugan, A. Myers Sur. No. A-640. Drlg. 1,720 ft.

Homarado Oil Co. No. 1 H. D. Field, J. B. McClyman A-735, 6⅝-in. 1,216 ft. W.O.C.

W. M. Johnson No. 1 G. M. Smith, J. Boyle A-88. S.D. 275 ft.

Joseph Oil Co. No. 1 Wm. Bergman, John Barnett A-12. Drlg. 750 ft.

Lanier et al No. 1 Norman, J. Bush Sur. A-107. Drk.

A. N. Landes No. 1 Mrs. O. Wilson, E. Reed A-849. Drlg. 280 ft.

Mills & Carey No. 1 Bezner, J. B. Trenary A-1,043. Drlg. 175 ft.

Mullins & Weil No. 1 Rose T. Hardeway A-464. Spudding.

Nair Oil Corp. No. 1 England, J. C. McElroy A-711. Drlg. 1,920 ft.

E. R. Robison No. 1 J. Krebs, H. Wilkey Sur. A-1,090. Drlg. 1,350 ft.

Wertheimer et al No. 1 W. A. Erwin, J. Armendaris A-1,234. Spd. & S.D.

Whitehead et al No. 1 Lynch, A. Edmiston A-353. Loc.

Denton County

C. S. Hoad No. 1 Travelers Insurance Co Wm. A. Thompson Sur. A-1,238. S.D. 1,860 ft.

Manning & Moore No. 1 E. L. Darnell, L. Walters Sur. A-1,329. Drlg. 2,040 ft.

Foard County

Humble O. & R. Co. No. 1 Burnett sec. 16, Blk. X, S.P.R.R. Sur. Drlg. 3,560 ft.

Jack County

J. W. Campbell No. 1 W. J. Cannon, E. P. Costen A-1,825. Drlg. 800 ft.

T. J. Deskins No. 1 Jones, H. Stutter, A-1,269. Loc.

S. B. Edwards No. 1 Bryson, J. Hughson Sur. A-256. Drlg. 1,375 ft.

W. H. Hammon No. 1 G. E. Evett, H. Plaster Sur. Drlg. 810 ft.

W. H. Hammon No. 1 Kuykendall, B.S.&F. A-1,720. Drlg. 1,904 ft.

C. Kadane No. 1 E. F. Smith, S.P.R.R. Sur. A-522. S.D.O. 1,715 ft.

States Oil Corp. No. 1 J. Lowe, J. Hughson A-256. Drlg. 2,518 ft.

Sterntexas Oil Co. No. 1 Boyd, J. N. Wright Sur. A-898. S.S.O. 8,370-82 ft.; testing.

Montague County

Bowden et al No. 1 Buck Est., D. F. Mallard A-925. S.D. 200 ft.

Grisso Royalty Co. No. 1 Jordon, T. R. Jackson A-394. Drlg. 3,110 ft.

Jim Seeds et al No. 1 Coombs, sec. 58, M.E.P.&P. Sur. Drlg. 2,230 ft.

Sinclair Prairie Oil Co. No. 1 Holt Est., Blk. 45, K.C.S.L. Cmt. 12½-in. 400 ft.; S.D.; W.O.C.

R. Franklin Smith No. 1 Cora Hurd, E. Ballinger Sur. Drlg. 1,725 ft.

Wichita County

Clark et al No. 1 C. T. Marshall, J. Cole A-838. Spg.

Pete Harmon et al No. 1 J. B. Jamison, J. Deck Sur. A-52. Drlg. 1,610 ft.

J. M. Morton No. 1 Housler, J. C. Pike, A-509. Drlg. 1,660 ft.

Reno Oil Co. No. 1 W. T. Waggoner-D, sec. 1, S.&M. Sur. A-393. Fsg. 1,576 ft. Drlg. 1,635 ft.

Schultz No. 1 Ed Foster, H.T.&B. A-129, M.I.M.

J. M. Seaberry No. 1 Guggenheim, sec. 15, Cherokee Co. Sch. Lds. S.D. 700 ft.

Wilbarger County

Franklin Oil Co. No. 1 D. G. Feller, et al, sec. 108, Blk. 14, H.&T.C. Sur. S.D. 1,570 ft.

Smith No. 1 S. A. Dill et al, sec. 32, Blk. 14, H.&T.C. Sur. S.D. 2,200 ft.

Webb & Rogers No. 1 Mrs. D. Coffee, sec. 44, H.&T.C., Blk. 15. Spudded.

Young County

Associated Developers No. 1 Terrell, T.E. &L. 285. S.D. 3,011 ft.

S. Caprito et al No. 1 Mrs. N. Loquey, A. Irvin A-1,779. Loc.

Art Cox No. 1 J. T. Rogers, J. Ray D. 1,628. R.U.S.T.

W. D. Eastland No. 1 A. R. Manning, T.E. &L. 3,412. Drlg. 500 ft.

Hinson Tidwell No. 1 Thompson G.L. 3,770-76 ft.; testing.

D. M. Knox No. 5 Burkett, T.E.&L. 1,412. Drlg. 2,345 ft.

C. D. Neff et al No. 1 W. A. Dennis, C. F. Bass Sur. T.D. 3,692 ft.; C.O.

Pitzer West et al No. 1 W. R. Dollins, T.E. &L. Sur. 615. Drlg. 1,775 ft.

Rathke Oil Co. No. 1 O. W. Hill, J. C. Graham A-122. Drlg. 250 ft.

Rathke Oil Co. No. 2 J. T. Rogers, S. H. Graham Sur. A-124. G.L. 3,585-97 ft.; flowing 100 bbls. per day.

Yorktex Pet. Co. No. 1 F. G. Burnett, G. W. Hills A-151. Spudding.

TEX. PANHANDLE WILDCATS

Gray County

Bell O. & G. Co. No. 2 Furneaux, sec. 102, Blk. B-2, H.&G.N. Sur. Drk.

K. Kinsey No. 1 Stephens, sec. 187, Blk. sec. 546, Blk. H, B-2, H.&G.N. Sur. T.D. 2,475 feet, fishing tools.

J. R. Phillips No. 1 W. H. Taylor, 280 ft. from N and 374 ft. from E lines of W½ of sec. 9, Blk. B-2, H.&G.N. Sur. Drlg. 60 ft.

Warner Oil Co. No. 1 Parker, 330 ft. from S and W lines of NW¼ of sec. 18, Blk. H. A. Wallace Sur. T.D. 2,245 ft.; R.U. S.T.

Hartley County

O. V. Beck et al No. 1-A Matador Ranch sec. 20, Blk. 32, C.S.S. Sur. Pipe stuck 4,600 ft. and S.D.

Hutchinson County

Harry Stekall No. 1 Erle Thompson, sec. 5, Blk. M-18, D.P. Sur. Drlg. 2,080 ft.

Moore County

Moran Bros. No. 1 Lucky Tiger Oil Co., 330 ft. from S and E lines, SE¼ sec. 5, Blk. 1, T.D. Sur. Drlg. by 8¼-in. csg. at 2,744 ft.

Shamrock O. & G. Co. No. 1 Brumley, 1,320 ft. from S and 660 ft. from E lines of W½ of sec. 398, Blk. 44, H.&T.C. Sur. Cellar.

Wheeler County

Allender & Heare No. 1 Harvey, sec. 67 Blk. 13, H.&G.N. Sur. S.D. 2,193 ft.; H.F.W.

Johnston et al No. 1 Rabo, sec. 105, Blk 23, H.&G.N. Sur. Spudded and S.D.

Phillips Pet. Co. No. 1 Porter, sec. 35 Blk. A-8, H.&G.N. Sur. T.D. 3,735 ft.; Underreaming 8¼-in. csg.

East Texas Fields

(Continued from Page 78)

mits to drill 25 more wells in the field in the J. Lewis Survey.

One other well, Hollandsworth Drilling Co. No. 1 A. O. Brown, in the southeast corner of the Talco townsite, was completed for 40 bbls. per hour flowing through 2¼-inch tubing. Total depth was 4,347 feet, with top of the Paluxy cored at 4,170 feet.

Rusk Pool—Cherokee County

T. J. Wood and others, discoverers of the small pool 6 miles southwest of Rusk, in Cherokee County, a couple of years ago, have extended this pool about 2 miles southwest, completing their No. 1 J. E. Huggins, in the Levi Jordan Survey, for an initial production of 116 bbls. net oil, the well making about 60 per cent b.s. and salt water, through three-sixteenths inch tubing choke. Total depth of the hole is 5,186 feet. Other tests will no doubt be drilled at once between this extension well and the field, in which three other small wells are producing.

Talco Outpost

Earl Bateman and others are still working on their No. 1 Phillips, in the William Birdwell Survey, about 2 miles southwest of the nearest production, in Franklin County, in an effort to make a producer, in which they will not doubt succeed. It was bottomed at 4,361 feet, but plugged back 18 feet to shut off bottom-hole salt water. It then showed pure oil and drilling mud when an oil thief was run, but the thief was stuck in the hole when being pulled out, which has held up completion of the well. This test will no doubt mark an important extension to the pool, with two offsets already rigged up to drill to the west and another outpost rigged up over a half mile farther west.

Wildcatting

T. Sharp and P. Gunther No. 1 E. E. Lamb, in the James Sparks Survey, 3 miles southeast of Streetman, in Freestone County, was eliminated this week as a possible discovery well. It logged salt water sand at 3,375-78 feet after topping the Woodbine section at 3,340 feet.

The Penn Oil Corp and others have moved in a derrick on a 5,000-acre block in the Sally Owens Survey, in southeastern Hunt County, preparatory to sinking a reported 6,500-foot test in quest of Paluxy or Glen Rose production along the projected fault plane in that area. It will be the first deep test along the fault in Hunt County.

Talco Hearing

The Railroad Commission will hold a hearing on the new Talco field at Paris, Tex., on July 15. Spacing rules, daily allowables, casing programs and other pertinent factors pertaining to the pool are expected to be discussed.

Leon Test

The Trio Oil Co. of Tulsa is reported to have blocked about 7,000 acres northeast of Centerville, in Leon County, centering in the E. Ritter and O. P. Reams Survey, and to have made a tentative location about 2½ miles south of the first Shell Petroleum Co. test in the Swazey Survey. The company, it is said, will take gas from the Beggs well of the Shell Petroleum Corp. for drilling fuel.

EAST TEXAS COMPLETIONS

Following are East Texas completions for the week, with top of sand and total depth records and initial production:

Gregg County

Arkansas Fuel No. 37 Burnside, 3,481-3,507 feet, 20 bbls. in 10 minutes; No. 4 J. D. Davis, 3,591-3,607 feet, 17 bbls. in 10 minutes; No. 17 Whittaker, 3,515-40 feet, 22 bbls. in 15 minutes. Atlantic and others No. 3 J. R. Fenton, 3,607-41 feet, 154 bbls. per hour. Cox & Hamon No. 7 E. Lacy, 3,510-75 feet, 80 bbls. per hour. Showers & Moncrief No. 1 D. B. McPherson (formerly Farrett and others), 3,523-47 feet, 33 bbls. in 30 minutes.

Gulf Oil Corp. No. 45 Shepherd, 3,479-3,503 feet, 74 bbls. per hour. Humble Oil & Refining No. 43 W. R. Hughes, 3,642-54 feet, 52 bbls. per hour. H. F. Lane and others No. 1 J. M. Hamby, total depth 3,647 feet, dry and abandoned. Selby Oil & Gas No. 27-B Snavely, 3,556-72 feet, 100 bbls. per hour; No. 32-B Snavely, 3,568-77 feet, 60 bbls. per hour. Stanolind No. 8-B Harley, 3,599-3,664 feet, 15 bbls. in 15 minutes; No. 17-B Stuckey-Thrasher, 3,549-3,621 feet, 60 bbls. per hour. Stanolind and Atlantic No. 14 M. Hay, 3,517-78 feet, 27 bbls. in 20 minutes. Sun Oil Co. No. 9 G. A. Tate, 3,515-76 feet, 18 bbls. in 15 minutes.

Superior Oil Co. No. 20 Ingram, 3,530-58 feet, 78 bbls. per hour. G. C. Baggett No. 3 C. L. Still, 3,545-57 feet, swabbed 20 bbls. per hour. Leo Bell No. 1 C. M. Dickson, 3,520-64 feet, pumping 15 bbls. daily. D. M. Wiley and C. N. Cope No. 1 Border, 3,710-11 feet, pumping 40 bbls. in 24 hours, 80 per cent salt water. Gulf Oil Corp. No. 12 M. Charles, 3,615-26 feet, 77 bbls. per hour; No. 85 Hilburn, 3,565-90 feet, 76 bbls. per hour. Carter-Jones (formerly Lone Pine Oil) No. 3 S. Cleary, 3,523-47 feet, 75 bbls. daily by head; No. 4 Cleary, 3,523-47 feet, 25 bbls. per hour. B. F. Phillips No. 2 Greggston, 3,601-03 feet, 15 bbls. per hour on swab. Sinclair Prairie No. 60-A King, 3,456-67 feet, 26 bbls. in 20 minutes; No. 17-B King, 3,458-90 feet, 22 bbls. in 15 minutes. Winston Oil Co. No. 10 J. R. Jones, 3,696-97 feet, 75 bbls. in 75 minutes; No. 11 Jones, 3,704-05 feet, 40 bbls. per hour.

Rusk County

J. Beren and others No. 5 M. Kenney, 3,648-80 feet, swabbing 40 bbls. in three hours. Humble No. 11 H. Laird, 3,613-28 feet, 88 bbls. per hour; No. 6 O. Roberson, 3,605-94 feet, pumping 8 bbls. per hour. General American Oil Co. (formerly Hurtle Oil) No. 4-B H. Sexton, 3,640-73 feet, 13 bbls. per hour. Marion Oil Co. No. 2 C. Dickerson, 3,510-38 feet, pumping 10 bbls. per hour. John Wrather (formerly Overton Refining) No. 1 G. H. Morris, 3,662-63 feet, 20 bbls. per hour. D. K. Caldwell No. 2 B. Fox estate, 3,739-46 feet, 20 bbls. in 15 minutes. Gant-Garvin-Weggner No. 15 Harris, 3,543-3,957 feet, 32 bbls. per hour. Humble Oil & Refining No. 54 Silvey, 3,691-3,756 feet, 63 bbls. per hour. Hunt Production Co. No. 9-A S. Wilson, 3,761-3,776 feet, 35 bbls. in 20 minutes.

Marathon Oil Co. No. 22 C. L. Graham, 3,625-56 feet, 80 bbls. per hour. Georgian Corp. (formerly Maryland Oil Co.) No. 1 E. L. Woods, 3,798-99 feet, 40 bbls. per hour. Perot Oil Co. No. 2 H. Dickerson, 3,540-3,614 feet, 30 bbls. in two hours swabbing. Petroleum Marketing Co. No. 5 Arnold, 3,647-3,700 feet, 19 bbls. in 16 minutes. Retsal Drilling Co. No. 5 H. W. Coates, 3,557-80 feet, pumping 10 bbls. in two hours. Royal Petroleum Co. No. 1-B I. W. Wooley, 3,577-3,614 feet, pumping 20 bbls. in five hours. Sinclair Prairie No. 7 D. Bradford, 3,663-75 feet, swabbing 20 bbls. in 30 minutes. Sun Oil Co. No. 30 O. W. Knight, 3,619-25 feet, 60 bbls. per hour.

Smith County

R. J. McMurray No. 14 Roberson, 3,804-05 feet, 15 bbls. in 20 minutes. T. W. Medlin No. 6 Mayfield, 3,822-23 feet, 100 bbls. per hour. Texas-Gulf No. 12 Hodnett & Melton, 3,695-96 feet, 60 bbls. per hour. C. K. West No. 4 L. S. Sartain, 3,834-35 feet, pumping 20 bbls. per hour. J. S. Wheelis No. 9 Patterson, 3,697-98 feet, 40 bbls. per hour.

Cherokee County

Merry Brothers and Perrini No. 4 A. Kelley, 3,686-87 feet, 80 bbls. per hour.

Upshur County

Eastern Texas Pet. No. 1-B D. F. Smith, location abandoned; No. 2-B Smith, 3,617-18 feet, dry and abandoned. P. H. Pewitt No. 11 Phillips, 3,741-43 feet, 35 bbls. per hour. Rutledge-Boller No. 10 Todd, 3,680-81 feet, 35 bbls. per hour. Tide Water & Buttram No. 21 Nicholson, 3,654-63 feet, 8 bbls. in 10 minutes. Tide Water & Russ No. 21 Flewellen, 3,713-20 feet, 10 bls. in 10 minutes.

EAST CENTRAL TEXAS

Anderson County

Cortex Oil Co. No. 2 Barton, total depth 4,048 feet, 161 bbls. in 24 hours through one-eighth inch choke.

Cherokee County

T. J. Wood and others No. 1 Huggins, total depth 5,186 feet, 116 bbls. net oil, 60 per cent b.s. and salt water, through three-sixteenths inch choke.

Collins County

Port Bolivar Oil & Refining Co. No. 1 A. Shirley, dry and abandoned 1,963 feet, elevation 684 feet.

Henderson County

Roeser and Pendleton No. 1 A. J. Thompson, total depth 4,099 feet, 101 bbls. in 24 hours through one-eighth inch choke.

Titus County

Jule Alford No. 2 J. P. Fry, top water sand 4,341 feet, top Paluxy 4,328 feet, dry and abandoned 4,346 feet. Elevation 333 feet. Location is 1½ miles south and about 1,500 feet east of discovery well.

Hollandsworth Drilling Co. No. 1 A. O. Brown, top Paluxy 4,170 feet, top Georgetown 3,392 feet, total depth 4,347 feet, 40 bbls. per hour through 2½-inch tubing. W. B. Hinton No. 1 Carr (Peveto and others No. 1 Carr, the discovery well), recompleted, total depth 4,260 feet, 725 bbls. in 24 hours, pumping and flowing, making from 1 to 5 per cent salt water from behind casing and not from bottom of hole, elevation 377 feet.

Van Zandt County

Pure Oil Co. No. 7 Blackstock, total depth 2,914 feet, 103 bbls. in 24 hours.

Canadian Fields

(Continued from Page 77)

On the New Valley structure, McLeod Oil Co. No. 1 New Valley, LSD 4, section 6-21-2w5, is below 5,055 feet.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co. No. 1 McLaren, LSD 12, section 13-31-10w5, is below 5,610 feet.

In the Jumping Pound area west of Calgary, Northwest Co. No. 4 Bow River, LSD 2, section 31-24-4w5, is being abandoned at 2,012 feet.

On the Kootenay dome, farther south and west, Roxana Petroleum No. 1, section 8-24-7w5, has set 21½-inch conductor pipe and is deepening with 18-inch hole which it is planned to carry through the Kootenay and Fernie formations to the lime. Location is in a valley 9 miles south of Morley and 44 miles west of Calgary.

On the Birch Ridge structure, Elbow Oils No. 1, LSD 11, section 35-22-5w5, has resumed from 4,375 feet.

On the Pekisko structure, Pekisko Hills Co. No. 1, LSD 6, section 6-17-2w5, is in the lime below 3,655 feet with about 4,000,000 feet of gas and traces of oil.

On the Watson structure, Mar Jon Oil Co. No. 3, LSD 3, section 4-10-2w5, is below 4,700 feet, with some gas.

Brooks Gasser

In the Brooks area, eastern Alberta, Canadian Western Natural Gas Co. No. 6 has finished around 1,200 feet with a flow approximating 200,000 feet of gas a day. It is being connected with the local system.

Drilling Contractors

(Continued from Page 65)

mented on bottom. No. 8-B Cobb and No. 1 Moore are coring ahead for the 7,400-foot sand.

Smith & McDannald have abandoned their No. 1 Priesmeyer in Wharton County at 6,624 feet; are testing a wildcat in Zavalla County for Bay Oil Corp.; have two wells drilling in the South Houston field, two at Louise for Pure Oil Co., and are coring for the Marginulina horizone on a wildcat located in Orange County for Tide Water Oil Co.

Al Buchanan of San Antonio is increasing his operations in the lower Gulf Coast district. In addition to several rigs operating for the Plymouth Oil Co. in the Plymouth field of San Patricio County and wildcats drilling for Benedum & Trees in the

same county, a Buchanan rig will drill the Blanco Oil Co. No. 1 Welder. This test is located about 1 mile northeast of the Heyser discovery well in Calhoun County. Besides crews drilling in this area, Buchanan has contracts for drilling the Loma Novia and Seven Sisters fields of Duval County.

George McMurray of San Antonio completed a producer in the Dirks field of Bee County during the week for Dirks Brothers, and is approaching the sand in the same operator's No. 1 Bergel. The No. 1 Bergel is a west offset to the Voss field discovery well, recently completed south of the Ray field.

Gulf Coast Fields

(Continued from Page 66)

Shell Petroleum Corp. No. 1 Lacassane, on the Hayes prospect, southern Jefferson Davis Parish, testing at a plugged-back depth of 9,375 feet. Casing was perforated at 9,340-50 feet, and it flowed mud and salt water with the pressure building up to 2,800 pounds. The well was killed and another test is to be made. The hole was originally drilled to 9,802 feet, where it tried to blow out, causing the drill stem to stick, which resulted in the hole being plugged back, sidetracked and redrilled to 9,844 feet. It is reported that the well is being completed for a gas well in order that the fuel might be used for further drilling operations. Location is in section 20-15s-6e.

Two other wildcats in this parish are being watched. At the South Jennings prospect, Stanolind Oil & Gas Co. No. 1 C. E. Britt is coring in shale below 6,232 feet, and at the Woodlawn prospect, Strake Oil Corp. No. 1 Miller is drilling in shale below 7,657 feet. No shows have been reported.

At the Tepetate field, Acadia Parish, Continental Oil Co. No. 1 Fruge topped oil sand at 8,310 feet and is preparing to test after cemeting casing on bottom of the hole at 8,318 feet. Location is in the SW cor. of section 28-7s-2w.

Gillis Field

Louisiana & Texas Oil Co. No. 1 Buhler, located in the Graben area of the Gillis field, Calcasieu Parish, completed last week in the 5,200-foot sand for an initial production of 525 bbls. of pipe line oil per day, flowed at this rate for two days and began showing extremely large gas pressure which has just about converted it into a distillate well. Late in the week it was making approximately 16 bbls. per day with 1,600 pounds of pressure. Southeast of production, Union Sulphur Co. is moving in material for No. 1 Kaufman, located 1,548 feet south and 262 feet east of the center of section 13-9s-8w.

At the West Hackberry field, Cameron Parish, Sutton Oil Co. No. 5 Duhon topped oil sand at 3,260 feet and is bottomed at 3,272 feet with 7-inch casing cemented at 3,250 feet. Location is in section 22-21s-10w.

1,800 Bbls. Per Day

Texas Co. completed its seventh deep producer at the Lafitte field in Jefferson Parish when No. 4 Lafitte, in section 20-17s-24e, flowed 1,800 bbls. of pipe line oil per day through a three-eighths inch choke with tubing pressure 1,480 pounds. Oil sand was cored from 9,371-99 feet. Bottom of the hole is 9,420 feet. A production test was being made on the company's No. 4 Rigolettes Fur Co., which is bottomed in oil sand at 9,406 feet with 7-inch casing cemented at 9,360 feet.

Magnolia Petroleum Co. No. 1 Homeseekers Development Co., on the Esterwood prospect, Acadia Parish, has been abandoned at 9,465 feet. An electrical coring test showed several ohms in a sand at approximately 5,400 feet, but it was not considered of commercial value.

A production test was scheduled to be made on Magnolia Petroleum Co. No. 1 Hebert, located east of the discovery well of the Big Lake field in Cameron Parish. After testing salt water last week on a test from 8,606-18 feet, the total depth, the hole was plugged back to 8,603 feet and the operators were preparing to drill out cement to test at approximately 8,608 feet.

Humble Block in Beauregard

Humble Oil & Refining Co. is reported to have taken a block of 10,000 acres located on the Bear prospect, southern Beauregard Parish. The land was leased from the Long Bell Lumber Co. and centers around Townships 6 and 7s, Range 9w. On the Ville Platt prospect, western St. Landry Parish, Continental Oil Co. is reported to be making arrangements for a test to be drilled on its block of approximately 7,500 acres that centers around Township 3s, Range 3e. Royalty has been selling at $200 per acre base.

In the Spanish Lake area, Iberia Parish, a general lease play is underway with buying being done by the Continental Oil Co. and the Felmont Oil Co. It is reported that there are a total of 15 blocks to be drilled in Coastal Louisiana within the next several months. These blocks are located in Jefferson Davis, Calcasieu, Acadia and St. Landry Parishes.

Kansas Fields

(Continued from Page 74)

First showing of gas was at 2,522 feet.

Sedgwick County

D. R. Lauck No. 1 McLean, SW SW SE section 1-27-1w, wildcat on the northwest edge of the city of Wichita, was building rig. It was the only new work reported in Sedgwick County.

Barber County

Barbara Oil Co. No. 3 Lytle, C SW SE section 11-33-13w, in the Medicine Lodge area of Barber County, was acidized with 2,000 gallons, produced 9,750,000 feet of gas and was completed at 4,565 feet, total depth. Topeka lime was topped at 3,690 feet; chat, 4,506 feet.

Greenwood County

The only completion in Greenwood County was the C. Nye No. 2 Morgan, C NE NW section 7-24-12. It topped Mississippi lime at 1,791 feet; had pay at 1,808-14 feet, total depth. After acid treatment, it pumped 150 bbls. of oil in 24 hours.

Butler County

Two new operations were reported in Butler County, as follows: Empire Oil & Refining Co. No. 1 Doughty, NE cor. section 7-27-6, location; El Dorado Refining Co. and Skelly Oil Co. No. 2 Gilson, NW SE NE section 10-28-6, drilling below 1,475 feet.

Woodson County

Quartet Oil Co. No. 5 Otto, NW SW SW section 21-23-14, in Woodson County, was acidized with 3,000 gallons, pumped 15 bbls. of oil in 24 hours and completed at 1,700 feet, total depth. It topped lime at 1,661 feet and had pay at 1,680-88 feet. Gillespie & Son No. 1 Naylor, SW SW NW section 25-25-14, topped Mississippi lime at 1,481 feet, had a hole full of water at 1,513 feet, total depth, and was dry and abandoned.

Montgomery County

Benton Oil Co. No. 1 Harry Pitman, C NW SE section 10-33-15, 6 miles southwest of Independence in Montgomery County, produced 21 bbls. of oil a day, and was completed at 1,097 feet, total depth. It had 22 feet of Bartlesville sand, topped at 1,044 feet. Sinclair Prairie Pipe Line Co. made connections. The Benton company has a block of 865 acres in the area, and was preparing to start a second well about July 15.

Cowley County

Baden Production Co. No. 1 Sparks, SE SE NW section 35-33-4, wildcat in Cowley County, had a hole full of water at 3,260 feet and was dry and abandoned at 3,266 feet, total depth. It had sand at 3,191 to 3,223 feet; topped Mississippi lime at 3,246 feet, and had a showing of oil at 3,250-55 feet.

Work was started at one new Cowley County test. Moore and others No. 2 Radcliffe, SW cor. section 4-33-7, was building rig.

Sumner County

E. B. Shawver No. 4 Frankum, SE SE NE section 32-31-1w, in the Wellington area of Sumner County, was acidized with 1,000 gallons, made potential of 648 bbls. of oil and completed at 3,680 feet, total depth. Top of chat was 3,650 feet. Helmerich & Payne No. 1 Wartick, SW SE SW SE section 11-32-2, in the Oxford area, pumped 20 bbls. of oil in 24 hours after acidizing and shooting, and was completed. It topped Simpson formation at 2,926 feet, drilled to 3,051 feet, total depth, and plugged back to 3,000 feet to acidize.

The only new work in Sumner County was Olson Drilling Co. and Shell Petroleum Corp. No. 1 Community, SE NW NE section 14-32-2, an old well being deepened, drilling at 2,561 feet.

Michigan Fields

(Continued from Page 62)

Michigan Stray sand at the casing point.

New Locations

Thirteen permits issued by the State Conservation Department revealed the increasing interest in oil tests to meet the greater demand than for natural gas. Eight of the 13 were for oil, the first time in several weeks locations for gassers have not led the list.

Three of the 13 were for wildcat tests, namely: St. Louis Pipe & Supply Co. No. 1 William Carter estate, NE NE NW section 6-19n-15w, Sheridan Township, Mason County, a new western Michigan test; Daily Crude Oil Co. No. 1 Fred T. Hoffman, NW SW SE section 9-16n-7w, Fork Township, Mecosta County, and Nicholas Huffmaster No. 1 Mary Bordine, NE SE NW section 16-5s-6e, Milan Township, Monroe County, southeastern Michigan.

The rest include gas tests, one in Hinton-Mecosta, Belvidere-Montcalm with four locations, one for oil in Crystal-Montcalm, three for oil in Ferris-Montcalm and one for oil in Horton Township, Ogemaw County.

Reed Oil Co. has erected a rig for a new wildcat test to be drilled on the William Mossar lease near Portland for the Barton Oil Co. A block of about 3,000 acres has been leased around the test.

North Louisiana-Arkansas

(Continued from Page 64)

ported to be giving consideration to the drilling of five or six gas wells and one deep oil test on state-owned lands in the heart of the Jackson gas field, amounting to about 1,320 acres. At the last session of the Mississippi legislature, $115,000 was appropriated for this purpose.

Lamar County

Following intensive seismograph work on a block near the Louisiana line, Sun Oil Co. is preparing to stake location for a deep test in Township 4n, Range 15w, as soon as necessary title work is completed.

EAST TEXAS BORDER

Bowie County

A thorough test of the middle Trinity formations is expected in the J. Harper Survey of this county, after agreement was made by Quinn & Williams of Hooks, Tex., to assign 6,000 acres to an outside interest, with the consideration that a well be begun immediately to explore at least 3,000 feet below the base of the anhydrite.

Shell Petroleum Co.'s seismograph crew is beginning its sixth week in the northwestern portion of this county.

Westmouth Oil Co. abandoned No. 1 Phillips in the Hancock Survey this week. The test reached the contract depth of 4,300 feet, and failed to show favorable indications on Schlumberger test.

Marion County

Topping the leasing activity in the East Texas border counties was an 8,000-acre block being assembled just north of the Harrison County line in Marion County by the Atlantic Oil Co. The possibility of an extension well to the Rodessa field has been mentioned for this county. The Atlantic company has done extensive geophysical work here, as well as the Amerada Petroleum Co.

Harrison County

W. F. Bridewell No. 1 Platt in the F. C. Baker Survey of Harrison County, Texas, 1 mile west of the Louisiana line, was sold with a large amount of acreage to the Overtex Oil & Refining Co. This test, having the Travis Peak as its objective, has been shut down at 2,400 feet for the past four weeks, but is expected to start up soon.

The Atlantic, Pure and Sinclair Prairie companies continue active geophysical work throughout this county.

Shelby County

Sinclair Prairie company is adding to its holdings near Tenaha, Tex. In this same area Sun Oil added to its block of about 1,000 acres last week. These leases were in proximity of F. E. Mulroy and others' test on the D. T. F. Yordt Survey, now rigging up. A seismograph party, reported to be sponsored by Sun Oil Co., has done extensive exploratory work in this section within the last two weeks. Pure Oil Co.'s crew continues to work the Joaquin area of this county.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1936 High	1936 Low	Week ended July 3 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
125½	75	700	98¾	96	96	Amerada Corp.	788,675	N.P.	50cQ	7-31-36	$2.00	80	48½	55⅝	39
35⅛	26⅝	3,500	29⅜	28⅛	28⅜	Atlantic Refining	2,664,904	$25	25cQ	6-15-36	1.00	28	20½	35¼	21½
20	14⅜	7,100	16⅞	16	16	Barnsdall Corp.	2,131,090	$5	20cQ	8-1-36	‡.20	14¾	5⅞	10	5⅞
21⅝	14	33,500	20⅛	19	19⅞	Columbia Gas & Elec.	11,610,036	N.P.	20c	5-15-36	.20	15¾	3⅜	19¼	6⅝
15¼	11½	43,000	13⅜	12¾	12⅞	Consolidated Oil Corp.	13,983,287	N.P.	15cQ	8-15-36	.25	12¼	6½	14¼	7¼
38½	28⅛	7,000	31½	30	30½	Continental Oil of Delaware	4,682,671	$5	25c	7-31-36	.62½	35	15⅛	22¾	15¾
34¾	21	4,600	23¾	21	21½	General Asphalt	387,149	$10	25c	12-17-35	.25	22½	11¾	23½	12
12¼	6⅜	5,700	8⅞	8⅜	8½	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	7	1½	5⅝	2½
23	17¼	5,800	21½	20¾	21⅜	Mid-Continent Petroleum	1,843,872	$10	40cSA	6-1-36	.40	20½	9½	14¾	9⅛
26¼	16¾	1,700	18	17½	17⅝	Mission Corporation	1,399,345	N.P.	....	.....	....	17¾	10⅝	..	..
48⅜	19⅞	4,700	49⅜	44½	48⅛	National Supply of Delaware	382,591	$25	....	5-15-31	....	20⅞	9	21⅛	10
17½	12½	4,600	13⅛	12¾	13	Ohio Oil Co.	6,563,377	N.P.	25cSA	6-15-36	.30	14¼	9¼	15⅞	8½
18	11¾	500	13¼	12¾	12¾	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.25	14	6¾	9⅜	5½
4¼	1⅜	200	2½	2½	2½	Panhandle P. & R.	198,770	N.P.	....	.....	....	1⅞	½	2½	⅝
49⅜	38⅛	9,300	43¼	41⅛	41⅜	Phillips Petroleum	4,152,836	N.P.	50cQ¶	6-1-36	1.25	40	13¾	20¾	13⅜
16½	11⅞	3,200	14⅜	13⅞	14	Plymouth Oil Co.	1,050,000	$5	25c	9-30-36	.25	13	6½	16¾	7¼
24⅞	16¼	16,500	18¾	17¼	17½	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	17	5⅞	14⅞	6⅛
43⅝	30¾	1,200	33	32	32	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	6-15-36	1.00	36⅞	20¾	38⅜	20¾
19¼	14¾	13,900	17⅞	16¾	17¼	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	16½	5½	11½	6
120⅛	110½	800	120	119¼	120	Shell Union Oil pfd.	400,000	$100	....	7-1-31	....	111	63⅛	89	57
6¾	4⅝	5,000	5¼	4¾	5¼	Simms Petroleum	461,698	$10	1.25 liq.	7-20-36	11.75 liq.	18¾	4⅜	17⅛	7¼
31½	19½	1,300	24⅞	23¾	23¾	Skelly Oil	1,008,514	$15	....	12-15-30	....	20½	6½	11½	6
17	12½	36,000	13⅜	13	13⅛	Socony-Vacuum	31,151,075	$15	20cSA	3-16-36	.30	15¾	10⅝	19⅞	12½
47⅝	35⅜	8,300	37¾	37	37¼	Standard Oil of California	13,014,754	N.P.	25cQ†	6-15-36	1.00	41⅛	27¾	42⅞	26½
40⅛	32⅜	6,500	34½	33¾	34¼	Standard Oil (Indiana)	15,215,677	$25	25cQ†	6-15-36	1.00	33⅜	23	32¾	23¼
30	25	300	25	25	25	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	....	32	20	41	26
70	51⅛	18,100	60¼	57¾	58½	Standard Oil of New Jersey	25,856,081	$25	75cSA¶	6-15-36	‖1.25	52⅝	35¾	50⅛	39¼
91	72	3,900	78	77½	78	Sun Oil	1,733,013	N.P.	25cQ	6-15-36	$1 & 7% Stk.	77	60½	74¼	51½
39½	28⅞	29,300	36½	35⅛	36½	Texas Corp.	9,340,069	$25	25cQ	7-1-36	1.00	30¼	16½	29⅜	19⅝
15¼	7½	4,100	11	10½	10½	Texas Pacific Coal & Oil	880,703	$10	25c	8-1-36	....	9¼	3¼	6½	2½
19⅛	14¾	5,700	15¾	15	15¾	Tide Water Associated	5,642,342	N.P.	15cQ	6-1-36	....	15⅞	7⅝	14⅜	8
106½	100⅝	1,500	105¼	105	105⅛	Tide Water Associated pfd.	626,221	$100	$1.50Q	4-1-36	§6.50	104½	84	87	64½
28½	20⅞	2,600	22½	22	22¼	Union Oil of California	4,386,070	$25	25cQ	5-9-36	1.00	24	14¾	20½	11½
31⅝	22⅝	700	26¼	25¼	26¼	Union Tank Car Co.	1,200,000	N.P.	30cQ	6-1-36	1.20	26½	20⅞	25¾	15⅝
5¼	2¾	1,200	4	3⅞	3⅞	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	3½	1	5¾	2

*Ex-dividend. †Plus extras. ‡Also 50 per cent in stock of Barnsdall Ref. §Partly on account of accumulation. ‖Dividend 4/75 Mission Corp. paid 3-15-35. ¶Includes extras.

New York Curb

1936 High	1936 Low	Week ended July 3 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
20¼	13¼	3,200	15⅝	14¾	15⅛	Bridgeport Machine Co.	150,000	N.P.	....	5-1-30	....	14⅛	3¾	3¾	½
50	39¾	100	40½	40¼	40¼	Buckeye Pipe Line Co.	200,000	$50	75cQ	6-15-36	$3.00	42½	30½	38	26
4⅞	2½	3,500	2⅞	2¾	2⅞	Carib Syndicate	799,020	25c	....	.....	....	4¼	1⅝	5½	1½
124¾	105	No sales	..	..	..	Chesebrough Mfg. Co.	120,000	$25	$1.50Q	6-29-36	6.50	157	115	150	116
7⅝	3	27,000	4⅞	4½	4⅝	Cities Service	37,804,394	N.P.	....	6-1-32	....	3¼	¾	4¼	1¼
4	1⅛	11,900	2	⅝	⅞	Colon Oil	2,200,000	N.P.	....	.....	....	2⅛	½	3¼	½
4⅛	1½	1,100	2	2	2	Cosden Oil	399,687	$1	....	.....	....	1½	¼	3⅞	½
34¾	19⅞	5,900	27½	25⅝	26¼	Creole Petroleum	6,974,356	$5	25c	7-15-36	.20	23¾	10	14⅜	9⅝
12	9	No sales	..	..	..	Darby Petroleum	351,390	$5	25cSA	1-15-36	.50	8⅞	4	7½	4⅛
4⅜	1⅞	1,000	3¼	3	3¼	Derby Oil & Refining	263,162	N.P.	....	.....	....	2	¾	2¼	1
44	39	No sales	..	..	..	Eureka Pipe Line	50,000	$50	$1Q	5-1-36	4.00	38	33¼	37	30
98	72	2,400	81¼	79½	79½	Gulf Oil Corp.	4,538,101	$25	25c	7-1-36	....	74¾	50¼	76¾	49¾
76½	57	4,800	63½	60	63	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	7-1-36	1.25	64	44	49½	33¼
24½	20	3,700	21¼	20¾	21	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-36	1.25	22½	15⅜	17⅞	12⅝
9¼	5½	100	7¼	7¼	7¼	Indiana Pipe Line	300,000	$10	20cSA	5-15-36	.35	6⅛	3⅝	6⅞	3⅝
39⅝	33½	6,200	36¼	35⅛	35⅞	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-36	2.50	39¾	28	33⅜	19⅜
15⅜	9⅞	3,700	12¼	11½	11⅝	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	3-16-36	.10	11⅜	4⅜	5	2⅛
15	7⅜	100	11½	11½	11½	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	8⅛	3½	6	3⅜
14¼	9⅞	3,300	10¾	10⅜	10⅜	Lone Star Gas	5,382,723	N.P.	20cSA	8-15-36	.30	10⅞	4½	8⅜	4¼
8⅜	5	500	5⅞	5¾	5⅞	Mountain Producers	1,682,182	$10	30cSA	7-1-36	.90	5¾	4⅛	5½	4
23	17⅝	1,500	19	18¼	18¼	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-36	1.25	20	11¾	18⅛	13⅛
15¾	9¼	600	10⅜	10⅛	10⅛	National Transit	509,000	$12.50	40cSA	6-15-36	.75	10⅝	6¾	9½	7
4½	2⅞	1,100	3	3	3	New Bradford Oil	1,445,202	$5	10cSA	5-15-36	.20	3¼	2	2½	1¾
6⅝	1⅝	400	3	2¾	3	New Mexico and Arizona	1,000,000	$1	....	.....	....	2½	1	2¾	1
6¼	4½	No sales	..	..	..	New York Transit	100,000	$5	15cSA	4-15-36	.30	4⅞	3	4¾	3
9¼	4⅞	800	6	5½	5½	Northern Pipe Line	120,000	$10	15cSA	7-1-36	.50	8	5¼	7	4⅝
6⅝	3¼	9,300	5⅞	5½	5½	Pantepec Oil	1,608,700	N.P.	....	.....	....	4⅜	1¼	2⅝	⅞
19¼	4½	4,600	15⅞	15	15½	Root Petroleum Co.	336,045	$1	25c	8-1-36	....	5	1½	..	..
4¾	1⅞	200	3¼	3	3	Ryan Consolidated	296,931	N.P.	....	.....	....	2½	⅝	3¾	⅞
10	7	1,200	7½	7⅛	7½	Salt Creek Producers	1,496,859	$10	40cSA	6-30-36	1.20	7½	5½	7⅞	5½
40½	32½	300	38½	38⅜	38⅝	South Penn Oil	1,200,000	$25	50c†	3-31-36	1.35	34½	21⅝	26½	17½
7⅞	3¼	No sales	..	..	..	Southern Pipe Line	100,000	$10	15cSA	3-2-36	.30	5	3⅞	5½	3½
60	54	No sales	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$10 spl.	7-1-36	5.00	56	44¼	47	41
23¾	17¼	2,800	17⅞	17½	17½	Standard Oil of Kentucky	2,604,790	$10	25cQ	6-15-36	1.25	24	18	18¾	14⅝
14⅝	11½	900	11¾	11	11¼	Standard Oil of Nebraska	188,403	$25	....	6-20-34	....	12	7¾	16⅞	8¼
36¼	21¾	100	26¾	26¾	26¾	Standard Oil of Ohio	753,740	$25	25c	7-15-36	....	23⅝	11½	28½	12¼
5	2⅝	12,400	4¼	4	4¼	Sunray Oil	1,610,810	$1	....	4-15-31	....	2⅞	⅞	2	⅛
9¾	6	600	6¼	6¼	6¼	Texon Oil & Land	336,028	N.P.	15cQ	6-30-36	.60	6⅞	5	11	4⅜
7¼	4¾	17,000	5⅜	4¾	5⅝	Texas Gulf Producing Co.	888,076	N.P.	....	12-29-34	....	4¾	2½	7	3⅜

*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note.—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

PERSONAL

PHILIP G. WHARTON, general auditor, Atlantic Refining Company, who was elected a director of the National Office Management Association at the organization's Seventeenth Annual Conference in Swampscott, Mass., June 8 to 10. Mr. Wharton is past president, Philadelphia chapter, of the association, and a director of the Philadelphia chapter of the National Association of Cost Accountants. He became general auditor of the refining company last year, having advanced since 1917, when he was transferred to the auditing department, through various offices to assistant general auditor and finally general auditor. He has been with Atlantic Refining Company since 1911.

HERMAN L. BROWN, independent oil operator of Shreveport, La. is visiting in Austin, Tex.

WILLIAM M. BARRET, consulting geophysicist of Shreveport, La., is on a business trip through the oil and mining areas of California.

H. C. WALKER, member of the legal committee of the Arkansas-Louisiana division of the Mid-Continent Oil and Gas Association, is attending to business in New York and eastern points this week.

B. H. BLAND, assistant chief scout for the Shell Petroleum Corporation at Houston, Tex., has been transferred to the East Texas field with headquarters at Kilgore, Tex. R. O. TRAVIS, of Mexia, Tex., succeeds him at Houston.

D. W. BELL and G. R. TREANOR, specialists in petroleum investigations for the United States Tariff Commission, will return to their Washington, D. C., headquarters this week after spending six weeks at points in California, Texas, Oklahoma and Kansas. Mr. Bell several years ago was connected with the Tidal Refining Company with headquarters in Tulsa.

R. G. TRIPPETT, president of the General American Oil Company of Shreveport, La., is attending to business matters in New York City and Washington, D. C.

L. H. DEATHERAGE, sales manager for the Bell Oil & Gas Company, Tulsa, accompanied by MRS. DEATHERAGE and their two children, left last Saturday on a motor trip to the Yosemite Valley, California, where they planned to remain two weeks.

W. W. BOND of Link-Belt Company, Indianapolis, Ind., has returned to the Indianapolis factory following a two weeks' trip through the Mid-Continent and Gulf Coast oil territory. At Dallas, Tex., he was joined by G. N. HOWSON, Dallas district manager, industrial division of Link-Belt, for a trip to Houston and other Gulf Coast points.

JAMES W. WILT and RUSSELL WOOD, of the Honolulu Oil Corporation, were elected chairman and secretary, respectively, of the Taft chapter of the California Natural Gasoline Association at the final meeting of the fiscal year held recently at the Fox Hotel in Taft. A. K. HAGEMAN, of Smith Booth Usher Company, addressed the meeting on small high-speed engines for the oil industry, and FRED FISCHER, of the Southern California Gas Company, presented a general brief of laws of wills and succession in California.

M. C. HOOVER, scout for the Shell Petroleum Corporation at East Texas, has been transferred to El Dorado, Ark.

DICK (RUFUS) O'NEIL, scout for the Shell Petroleum Corporation at Houston, Tex., has been transferred to Midland, Tex.

WILLIAM MAUGHAN, drilling contractor of Calgary, Alberta, visited Vancouver, British Columbia, and other Pacific Coast points recently.

DORSEY HAGER and GRENVILLE G. HOWARD have opened offices in Winnipeg, Manitoba, as petroleum geologists and production engineers.

LONG HUDELSTON, scout for the Shell Petroleum Corporation in the East Central Texas district, is spending his vacation in Fort Worth and Houston, Tex.

MISS MARTHA W. CROSBY, secretary of the scouting section of the Shell Petroleum Corporation at Houston, Tex., is spending her vacation in Southeast Texas.

G. T. ROCKENBAUGH, Mid-Continent representative for the Beaumont Iron Works, was injured in an automobile accident near Dallas, Tex., on Friday, June 26.

SAM McKINNEY, in charge of the blue printing room of the Shell Petroleum Corporation, has been promoted to scout and transferred to the East Texas field. His duties will be taken over by FRED DUVAL.

E. L. DECKER, official of the Martin-Decker Supply Company, and MRS. DECKER, sailed from New York June 27 aboard the S. S. Virginia bound for Los Angeles, Calif. Mrs. Decker is recuperating from a painful eye injury.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

The Carlyle field in Clinton County, Illinois, is attracting much attention. An 1,800-barrel well was completed by Surpass Oil & Gas Company last week.

The Interstate Commerce Commission has ordered an investigation of the oil pipe lines.

H. C. Reeser has been elected president of the Ohio Fuel Supply Company. He had been secretary and treasurer since 1902.

20 YEARS AGO

The Mid-Continent field produces 464,100 barrels per day as follows: Caddo, La., 34,100 barrels; Electra, Tex., 24,000 barrels; Kansas, 34,000 barrels; Oklahoma, 368,000 barrels. The Gulf Coast produces 67,000 barrels.

The Prairie Oil & Gas Company and Prairie Pipe Line Company have moved into their new commodious building in Independence, Kans.

The Gulf Production Company, Gulf Pipe Line Company and Gulf Refining Company have moved headquarters from Beaumont to Houston, Tex., and are quartered in the new Jones Building.

The Sinclair Oil & Refining Corporation will immediately begin the work of constructing a pipe line from Tulsa to Chicago, Ill. It is understood the company will erect refineries in St. Louis, Mo., and in Chicago.

10 YEARS AGO

Transcontinental Oil Company opens the Nigger Creek pool, west of Mexia, Tex., with a 2,800-barrel well.

C. Campbell Osborn, petroleum engineer, warns against an oversupply of crude before the year is over.

Thomas A. Simpson, assistant to the president of the United States Shipping Board, and formerly a drilling contractor in the Mid-Continent and Eastern fields, dies suddenly in Washington, D. C.

The late John W. Higgins, Glenrock, Wyo., oil man and a widower, left his estate of $500,000 to the State of Wyoming because he had made his fortune in that commonwealth.

G. S. IRWIN, scout for the Shell Petroleum Corporation at Beeville, Tex., is spending his vacation in Monterrey, Mexico.

HENRY A. LEY, geologist for the Rio Oil Corporation with offices at Fort Worth, Tex., was in Houston, Tex., last week.

GEORGE A. HILLS, president of Houston Oil Company, is on an extended business trip to Mexico City. He is accompanied by MARION YOUNG, scout for the company.

BILL WEAVER, president of the States Oil Corporation, Eastland, Tex., is visiting with relatives in Virginia, and also spending some time in New York City while vacationing.

DAVID DONOGHUE, consulting geologist of Fort Worth, Tex., has returned to his home after a flight by plane to New York, thence to Houston, to San Francisco and to Fort Worth.

C. E. ARNOTT, vice president of Socony-Vacuum Oil Company, New York City, was a business visitor in Texas during the week, meeting with officials of the Magnolia Petroleum Company, a subsidiary, at Dallas.

MISS ANNA IRENE LINDSAY, of Petrolia, Ontario, and WILLIAM A. R. BRAYBROOK, of the International Petroleum Company staff at Negritos, Peru, will be married late in July in Guayaquil, Ecuador.

SHEIK HAMAD BIN ISA AL-KNALIFAH, of Bahrein Island, Persia, was a recent visitor in London, England, where he received from KING EDWARD VIII designation to the order of Knight Commander of the Indian Empire. The Sheik is one of the major royalty owners in the Bahrein Island oil concession of the Standard Oil Company of California.

PARAGRAPHS

TRAVIS L. GOLAY, formerly assistant chief enforcement officer for Texas Railway Commission, has moved to Shreveport, La., to take charge of the tax and insurance department of the recently organized General American Oil Company of that city.

FRANK A. HERALD, consultant, Fort Worth, Tex., has been appointed oil and gas valuation engineer for the Security Exchange Commission effective July 1. Mr. Herald will be connected with the newly organized oil and gas unit and will make his headquarters in one of the oil cities in the Mid-Continent region.

E. W. WEBB, president of the Ethyl Gasoline Corporation, last week announced several executive appointments. ROBERT L. JORDAN, manager of the Chicago division, has been named director of field personnel, a newly created post, with offices in New York. JAMES E. BOUDREAU, who has been head of the New York division, will succeed Mr. Jordan at Chicago. R. C. MURPHY becomes manager of the New York division and ROY L. GOLTZ assistant manager. ELWOOD R. ANDERSON was appointed manager of the gasoline testing laboratories, succeeding LESTER B. ROBERTS, who goes to Buenos Aires, South America, as representative of the Ethyl Export Corporation to direct the organization's marketing and blending activities in South America.

E. G. YOUNGBIRD, sales manager for the Shoreline Oil Company, and his entire sales force have moved from Chicago to the Shreveport, La., office of the Shoreline company.

RUSSELL B. BROWN, of Washington, D. C., general counsel for the Independent Petroleum Association of America, and RALPH T. ZOOK, of Sloan & Zook Company, Bradford, Pa., have been appointed delegates to the World Power Conference in Washington, September 7 to 12. The appointments were made by H. B. FELL of Tulsa, president of the I.P.A.A.

J. O. RUHL, manufacturer's representative of the Wheland Company, Chattanooga, Tenn.; W. S. BASSETT, manufacturer's representative of the Lucey Boiler & Manufacturing Company, Chattanooga, and CHARLES GRAHAM, JR., manager of the Ajax Well Tool Corporation, Houston, Tex., have opened joint offices at Houston in a suite in the Sterling Building. They previously have had their offices in connection with those of the Houston Oil Field Materials Company.

ROBERT J. KUHN, formerly electrolysis engineer with the New Orleans Public Service, Inc., has opened an office in New Orleans, La., as consulting engineer specializing in electrolysis and corrosion of pipe lines and other structures. Mr. Kuhn is a graduate of Tulane University and received a B. E. degree in mechanical and electrical engineering in 1923 and a master's degree 11 years later, the subject of his thesis having been "The Cathodic Protection of Pipe Lines from Soil Corrosion."

JULIAN C. GONZALES has been elected secretary of the Ethyl Gasoline Corporation filling a position left vacant by death of ARTHUR E. MITTNACHT. Mr. Gonzales joined the Ethyl organization in 1932 after engaging in the bond business following his graduation from Yale in 1926.

DR. T. A. LINK, chief geologist of Imperial Oil, Ltd., has returned to Calgary after a business trip to Lethbridge and other points in southern Alberta.

GEORGE L. NYE, district engineer for the Tide Water Oil Company at Kilgore, Tex., was a business visitor at the company's offices at Houston, Tex., the past week.

GLENN S. FRANCIS, of Vancouver, British Columbia, recently inspected the new oil developments in Alberta. He is visiting the Montana fields before returning home.

S. J. IVERSON, vice president of the Iverson Tool Company, Fort Worth, Tex., accompanied by MRS. IVERSON, is spending a vacation in New York and other eastern cities.

R. H. MORRISON, general manager of the California Company, Dallas, Tex., has just been named vice president of the newly organized California Texas Oil Company, Ltd.

M. A. VANGROGGEN, Vanouver, British Columbia, vice president of Roxana Petroleum, Ltd., attended the spudding of the company's No. 1 test on the Kootenay dome in Alberta recently.

H. F. EVERARD, formerly with the Richfield Oil Company of California, recently completed an inspection of the tar sand holdings of the International Bitumen Company near McMurray, Alberta.

ROBERT FRASER, for 26 years connected with the oil industry in Peru, with his wife and daughter, visited Petrolia, Ontario, recently. They left later via Vancouver, British Columbia, for Scotland where they will make their home at Edinburgh. Mr. Fraser is retiring from active work.

Got a Log-Cabin Start

Log-cabin origin is becoming rare, so it is worth mentioning that Bob Kerr, president of the Mid-Continent Oil and Gas Association, got that kind of start, having been born in a log cabin 37 years ago near Ada, Okla. His father, a farmer, was the first county clerk of Pontotoc County. Bob's path was not of the primrose-strewn sort; but living up to the best log-cabin traditions, he worked, wriggled, squeezed and otherwise made his way through high school and then entered the University of Oklahoma. He shifted to the Oklahoma Baptist University and then to the East Central State Teachers College in Ada. After receiving his diploma from the latter institution in 1915 he studied law in the office of Judge J. F. McKeel, now district judge in Ada, whose law partner he later became. For a time he sat as special justice of the state supreme court. In the World War he was a lieutenant overseas. In 1925 he was elected commander of the Oklahoma department of the American Legion. He is an artillery captain in the National Guard and a brigade executive officer of the Seventieth Artillery. Combining legal and oil interests, Mr. Kerr is a member of the Ada law firm, Harrell & Kerr, president and treasurer of the Kerr Petroleum Company and secretary-treasurer of the Anderson-Kerr Drilling Company. He was chosen president of the Mid-Continent Oil and Gas Association in 1935. His home is in Ada, where he is active in civic and church affairs.

BOB KERR

GEORGE H. LANG, vice president, Carter Oil Company, New York City, was in Tulsa this week on company business.

J. E. McFATE, of the Republic Steel Corporation, visited Mount Pleasant, Mich., oil interests and fields last week.

FRANK HOVELL, formerly of San Antonio, Tex., is now superintendent of the Henry H. Cross Company refinery at Smackover, Ark.

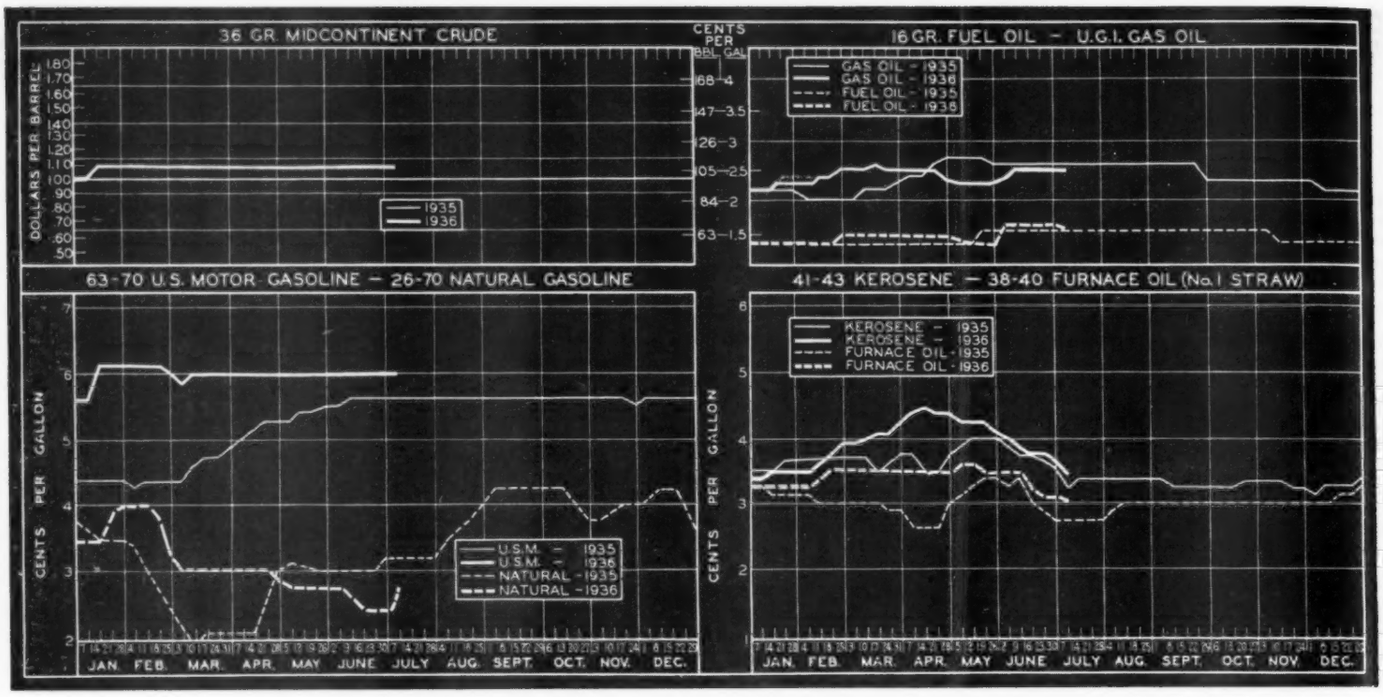
W. H. TOMLINSON, assistant mining engineer of the U. S. Bureau of Mines, is conducting a series of safety meetings at Mount Pleasant, Mich.

RALPH DIETLER, vice president of Stanolind Crude Oil Purchasing Company, Tulsa, was a business visitor last week in New York offices of Pan American Petroleum & Transport Company.

W. J. STROMATT, cashier's department, Marathon Oil Company, Tulsa, is recovering at a Tulsa hospital from an emergency operation for acute appendicitis.

CHARLES NIX, Muskegon, Mich., oil man and former Texas state amateur golf champion, was paired with LAWSON LITTLE, sensational former American and British open champion in an exhibition match which they won from HORTON SMITH, noted golfer, and a Muskegon amateur last week.

W. G. (BILL) CUMMINGS, for many years identified in the sale of oil field equipment, has joined the C. W. Cotton Company, 611 National Bank of Tulsa Building, in a sales capacity. In his connection, he will handle the sale of Scalbouy water treatment, Prescott pumps and the products of the Coppus Engineering Corporation.


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
CENTS PER BBL. GAL.
1935
1936
16 GR. FUEL OIL — U.G.I. GAS OIL
GAS OIL - 1935
GAS OIL - 1936
FUEL OIL - 1935
FUEL OIL - 1936
63-70 U.S. MOTOR GASOLINE — 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1935
U.S.M. - 1936
NATURAL - 1935
NATURAL - 1936
41-43 KEROSENE — 38-40 FURNACE OIL (No.1 STRAW)
KEROSENE - 1935
KEROSENE - 1936
FURNACE OIL - 1935
FURNACE OIL - 1936
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Representative Mid-Continent Quotations on Crude Oil and Refined Products. Basis Oklahoma (Group 3)

Group 3 Gasoline Market Apparently Gathering Strength for Advance

By T. F. SMILEY

In the Group 3 area, as in others, refiners look upon the present week as affording something of a test for the gasoline market. Independence Day traditionally is preceded by a surge of buying in preparation for the first big holiday of the summer season. In some cases enthusiastic jobbers overestimate their needs. In others the purchases are in extra-generous volume "just to be on the safe side." Inevitably there is a reaction immediately after the holiday, during which the trade adjusts itself to normal demand. This year the buying was on a stupendous scale, both because motor fuel consumption was setting new records and because, July 4 falling on Saturday, the holiday was a double one.

JUST PAUSING FOR BREATH

Observers watching the market to see how well it was going to pass through the post-holiday letdown said indications were that such relaxation as might appear would be little more than a pause to take breath. Instead of exhibiting weariness, the market, in the opinion of many, seemed tc be gathering strength for an advance. Prices have been stiffening noticeably. Third-grade material already is commanding an eighth-cent more than it did last week and predictions were made that buyers would be paying more for all grades within a short time. It was reasoned that an increasing number of refiners would find themselves in a sold-out condition and would remain out of the market for a time unless prices should go to higher levels.

Further evidence of a tighter market is seen in the growing disinclination to give concessions from ruling prices. Bargain-hunters almost always are able to find at least a few small refiners who, often because of inadequate storage facilities, are willing to sell at a quarter-cent to a half-cent less than the going price. Only scattered small lots are sold in this way and they are not regarded as affecting the recognized level of prices. Buyers say that in recent weeks it has been hard to find anybody, even among the most unfortunately situated refiners, willing to yield more than an eighth-cent from ruling quotations.

In connection with the record-smashing consumption of gasoline reported in all areas which provide outlets for Group 3 refineries it is pointed out that the gains are almost wholly in the regular grade. Sales of third-grade material in some cases are reported to be 10 per cent less than those of last year in the corresponding period. Several explanations are offered.

Pickup in demand for natural gasoline was accompanied by higher prices. It was predicted that before another week had passed there would be actual scarcity of natural in the open market in Oklahoma. The improved conditions were attributed for the most part to the increased refinery use attending heavier consumption of motor fuel.

COMPARABLE TO 1934

This year's natural gasoline market is more nearly comparable with that of 1934 than with that of last year. In 1935 the naturals were under the buoyant influence of a steadily strengthening refinery gasoline market, which began to rise early in the spring, and it had the added stimulant of heavy buying by the Humble Oil & Refining Co. The naturals started ballooning in April and they remained in the upper price levels till late fall. In 1934, however, the naturals hit their lowest point in June.

Furnace oils were fairly firm. Inquiries were of the bargain-hunting kind, but refiners showed no desire to make concessions, and quotations seemed likely to work upward. Little material was moving in the spot market. Kerosene was lower, and small lots of the 41-43 grade were said to have been picked up at concessions. The heavy fuels were easier. Industrial demand has lightened somewhat, and besides this the heavy crude runs to stills have resulted in accumulation of more fuel oil than can be absorbed readily in cracking operations. The lubricant group was acting well.

Refined Oil Market Barometer

Reports indicate the reaction in the gasoline market which usually follows the Independence Day spurt in buying is of minor moment this year, owing to the vigorous consumer demand which has been gaining impetus for weeks. Natural gasoline, which had been dragging, seems to be emerging from its dull period. Furnace oils, now in the storage season, are held rather closely.

MID-CONTINENT. Gasoline stronger. Naturals up. Kerosene off. Furnace oils steady.

EAST COAST. Gasoline spirited. Fuel oils strong. Furnace oils steady. Lubricants firm.

GULF COAST. Gasoline firm. Kerosene off.

PENNSYLVANIA. Gasoline strong. Kerosene off. Lubricants easier.

CALIFORNIA. Market firm. Naturals tight.

CHICAGO. Gasoline brisk. Kerosene and tractor fuels easier.

Eastern Gasoline Market Confident as Season of Heavy Demand Opens

By H. STANLEY NORMAN

NEW YORK, July 6.—Swinging into the normal period of heaviest gasoline consumption, Atlantic seaboard marketers continue to display confidence that satisfactory demand and price conditions will net gratifying third-quarter results. Lingering in the minds of some is concern over fourth-quarter business and the mild doubt whether even the brisk demand will liquidate gasoline stocks to a healthy level by October and November.

Universal reduction of a cent per gallon was posted in New York on July 1 when the state tax rate on gasoline was reduced that amount.

Operation of refineries in France, temporarily disrupted during the middle of June by labor walkouts, were resumed in time to forestall any appreciable movement of gasoline from other countries to French ports. Some of the major marketers diverted shipments to France which normally are directed elsewhere, but the net result was negligible due to replacement of equal amounts in terms of crude usually refined in French plants.

Prior to partial settlement of labor disputes in France, indications were seen that numerous marketers licensed to do business in that country might be forced into the open market to maintain government regulated inventories of 33⅓ per cent of their license totals. The temporary shutdown of French plants did cause some of the large marketers to import extra cargoes of gasoline usually supplied from their own refineries. In such instances, the crude normally moved to France was directed to the port from which gasoline stocks were withdrawn.

Inquiries for export business continue among Atlantic seaboard and Gulf Coast refiners, but the actual movement is small. One export marketer reported that inquiries for two cargoes of gasoline in the Gulf Coast were made by a foreign concern which finally filled requirements from Rumanian sources at a shade under prices quoted in this country.

Bunker C fuel oil on the Gulf Coast is one of the strongest links in the refined market at the moment and talk is not uncommon among marketers that the price of 85 cents per barrel may be raised in the near future. Numerous buyers were reported interested in the Bunker C grade of fuel, but that inquiries among Gulf Coast refiners disclosed that practically none was available. However, several plants are known to be in position to supply the fuel and higher bids probably will shake loose some of the stock.

Transfer of company-owned retail outlets to dealers continues throughout the eastern part of the country with Standard Oil Co. of New Jersey and its subsidiaries particularly active in it. The Standard of New Jersey has divested itself of all controlled service station outlets in Annapolis, Baltimore and Cumberland, Md. The Standard of Louisiana, directly controlled subsidiary of the New Jersey company, has also completed 100 per cent disposal of its retail outlets in Alexandria, Lafayette and Lake Charles, La., and the company no longer posts retail prices in those territories.

Local conditions forced a half-cent reduction late last week in gasoline prices in Baltimore and Washington, D. C., to dealers, but the retail posted market remained unchanged in the latter city. The tank-wagon market to divided dealers was posted by Standard of New Jersey at both Baltimore and Washington at 9.5 cents per gallon on June 29. The consumer tankcar price of 7.5 cents per gallon remained unchanged.

Postings of service-station prices by Standard of New Jersey were discontinued at Annapolis, Md., on May 13; at Baltimore on June 19 and at Cumberland, Md., on May 16, reflecting dates at which divestment of company-owned outlets was completed. Dullness and price weakness existing in the kerosene markets in Atlantic seaboard and Gulf Coast territories two weeks ago appear to have been overcome to a marked degree.

The diesel fuel market of $1.65 in New York harbor is another strong link in the picture. Heavy transatlantic travel is reported by all steamship companies and the demands for greater locomotive fuel are plainly reflected in the volume and prices of diesel fuel. Passages booked ahead for midsummer and early fall gives indication that this brisk trade will continue for months. Business in fully refined motor oils continues to show a satisfactory increase. Other grades of lubricants are also keeping abreast of the heavier demand for gasoline.

Despite lack of an appreciable amount of business at this particular season, furnace oils are holding firm and there appears little disposition on the part of manufacturers or dealers to sacrifice price for volume. The refiners and dealers appear content to permit stocks of burning oils to accumulate, expecting sufficient business during the fall and winter to absorb the material now moving to storage. Limited spot delivery orders at prices a fraction below the general postings ranging from 3¾ to 4⅞ cents per gallon are reported, but as in the past month the volume is so slight that such sales are not recognized as indicative of broad-gauge conditions.

Lubricating oils showed a healthier tone. There were no changes apparent in prices and none were in immediate prospect, observers said. Those in position to supply demand are reluctant to alter quotations until the trend is established on a long-pull basis. Sellers are fearful that abrupt increases in quotations might halt the movement which has been particularly lacking in bulk quantities.

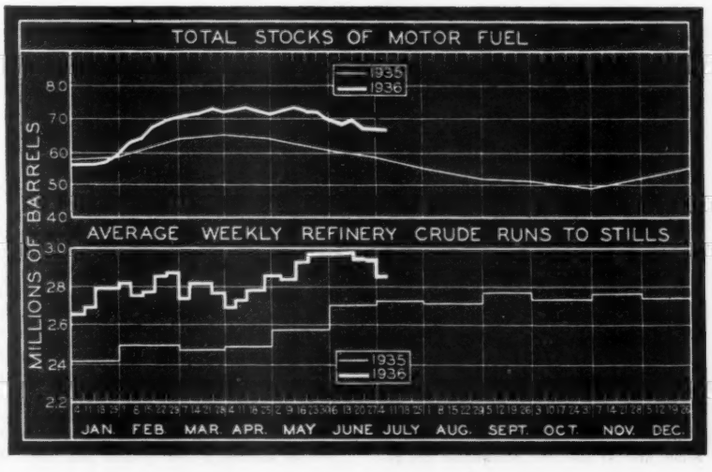
There was renewed activity in the wax and petrolatum movement for foreign destinations. Prices were unaltered in both the export and domestic columns. Domestic wax buying continued at slightly increased volume.

A. P. I. Weekly Refinery Statistics

Week Ending July 3, 1936

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	506,000	18,876,000	9,790,000
Appalachian	94.8	97,000	2,503,000	465,000
Indiana, Illinois, Kentucky	96.1	411,000	9,503,000	4,336,000
Oklahoma, Kansas, Missouri	84.8	286,000	6,480,000	3,381,000
Inland Texas	48.5	102,000	1,444,000	1,770,000
Texas Gulf	96.8	515,000	7,186,000	7,582,000
Louisiana Gulf	96.4	141,000	1,627,000	2,124,000
North Louisiana and Arkansas	90.0	44,000	413,000	410,000
Rocky Mountains	61.9	48,000	1,336,000	765,000
California	92.6	515,000	12,940,000	71,729,000
Total reported	89.7	2,665,000	62,308,000	102,352,000
Estimated unreported	.....	190,000	4,732,000	2,941,000
*Estimated total	.....	2,855,000	67,040,000	105,293,000
*Estimated total previous week	.....	2,930,000	68,441,000	105,285,000
†July 31, 1935	.....	2,739,000	56,446,000	108,322,000

*Bureau of Mines basis currently estimated. †Monthly report, U. S. Bureau of Mines.



Marketing Code

NEW YORK, July 6.—Directors of the American Petroleum Institute have been called to meet Thursday, July 9, to consider a report of a committee appointed last year to study the subject of a code of fair practices in marketing petroleum products. The committee is headed by C. E. Arnott, vice president of the Socony-Vacuum Oil Co., who is also chairman of the national committee of three which recently was directed to submit to the Federal Trade Commission a code formulated by representatives of marketing interests east of the Rocky Mountains.

The proposed code, which has been endorsed by refiners, jobbers, dealers and other groups throughout the region east of the Rockies, now contains 11 rules instead of 12, as originally. This is due to the dropping of Rule 7, dealing with contract sanctity. Another change in the proposed code is that in Rule 11, formerly Rule 12, the metropolitan areas designated for code committee organization are stated to be for illustrative purposes only. The cities named are all in the Middle West and were listed when the code was being worked out for the Middle West only.

W. R. Schuh, president of National Association of Petroleum Retailers, and Paul E. Hadlick, secretary of National Oil Marketers Association, are the other members of the national committee.

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of July 7, 1936

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank-wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Chicago	15.5	17.5	4.0	10.1
Decatur, Ill.	16.0	18.0	4.0	10.1
E. St. Louis	15 7	17.7	4.0	9.8
Joliet	14.5	17.5	4.0	10 1
Peoria	16.0	18.0	4.0	10.1
Quincy	15.8	17.8	4.0	9.9
Davenport, Ia.	16.0	(†)	4.0	10.1
Des Moines	15.8	(†)	4.0	9 9
Mason City	16.2	(†)	4.0	10.3
Sioux City	16.0	(†)	4.0	10.1
Duluth, Minn.	16.8	18.8	4.0	10.9
Mankato	16 4	18.4	4.0	10.5
Minneapolis	16.4	18 4	4.0	10.5
LaCrosse, Wis.	17.4	19.4	5.0	10.6
Green Bay	17.7	19.7	5.0	10.8
Milwaukee	16.3	18.3	5.0	10 4
Madison	17.4	19.4	5.0	10 5
Detroit, Mich.	15.0	17.0	4.0	8.8
Grand Rapids	15.4	17.4	4.0	9.3
Saginaw	15.6	17.6	4.0	10.1
Evansville, Ind.	17 7	19.7	5.0	10.6
Indianapolis	17.9	19.9	5.0	10 8
South Bend	18.1	20.1	5.0	11.0
Fargo, N. Dak.	17.4	19.4	4.0	11.5
Huron, S. Dak.	17.9	19 9	5.0	11.0
Sioux Falls	17.4	19.4	5.0	10.5
Kans. City, Mo.*	15 4	17.4	4.0	8.0
Springfield	15.1	17.1	4 0	9.2
St. Louis	15.7	17.7	4.0	9.8
St. Joseph*	15.4	17.4	4.0	9.5
Wichita, Kans.	14.9	16.9	4 0	8.0
Bartlesville, Okla.	15.0	19.0	5.0	8 5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in Iowa.

Discounts to dealers except in Iowa: 3¼ cents on premium and regular and 2¼ cents on third grade off service station prices; discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Dealers in Iowa sold at posted "Dealer Prices."

Stanolex Fuel Oil in Chicago

Effective June 1, 1936, f.o.b. Chicago tank-wagon prices: Range oil, less than 100 gallons, 8.75 cents; 100-149 gallons, 7.75 cents; 150 gallons and more, 7.25 cents. No. 1, less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents. Stanolex furnace oil, less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents. Stanolex fuel "A," less than 400 gallons, 5.75 cents; 400 gallons or more, 4.75 cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Atlanta, Ga.	20.5	22.5	7.0	*13.5
Augusta	20.0	22.0	7.0	*13 0
Macon	20.0	22.0	7.0	*13.0
Savannah	18.5	20.5	7.0	*13.0
Birm'ham, Ala.	20.0	22.0	8.0	11.0
Mobile	21.0	23.0	9.0	10.0
Montgomery	22.0	24.0	9 0	14.5
Jackson, Miss.	20.0	22.0	7.0	*13.0
Vicksburg	19.5	21.5	7.0	*13.0
Jacksonville, Fla.	18.0	20.0	8.0	10.0
Miami	19.5	21.5	8.0	13.5
Pensacola	21.5	23.5	9.0	12.0
Tampa	18.0	20 0	8.0	12.5
Lexington, Ky.	19.0	21.0	6.0	11.0
Covington	18.5	20.5	6.0	10.5
Louisville	19.0	21.0	6.0	10.0
Paducah	18.0	19.0	6.0	8.5

*Includes 1 cent state tax. Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon. Pensacola, Fla., has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Denver, Colo.	19.0	21.0	5.0	11.0
Pueblo	19.0	21.0	5.0	13.0
Grand Junction	21 5	23.5	5.0	15.0
Casper, Wyo.	19.5	21.5	5.0	11.5
Cheyenne	19.5	21.5	5.0	13.0
Butte, Mont.	21.0	....	6.0	14.5
Billings	22.5	24.5	6.0	14 5
Helena	22.5	24.5	6.0	14.5
Great Falls	22.5	24.5	6 0	14.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Twin Falls, Ida.	23 0	25.0	6 0	18.0
Boise	22.5	24.5	6.0	18.0
Albu'que, N. M.	18.5	20.5	*6.5	13.0

*Includes one-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3¼ cents.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
San Francisco	17.0	18.0	4.0	11.5
Los Angeles	16.5	17.5	4.0	9.0
Fresno, Calif.	17.5	18.5	4.0	11.0
Phoenix, Ariz.	21.0	22.0	6.0	‡16.0
Reno, Nev.	19 5	20.5	5.0	13.0
Portland, Ore.	19.5	20.5	6.0	13.5
Seattle, Wash.	19.5	20.5	6.0	13.5
Tacoma	19.5	20 5	6.0	13.5
Spokane	22.5	23 5	6.0	16.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank-wagon lots except in Phoenix where discount is 1 cent. ‡Includes 5-cent state tax.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Atl'tic City, N.J.	14.0	17.5	4.0	9.0
Newark	14 0	17 5	4.0	7.5
Annapolis, Md.	15.6	....	5.0	10.0
Baltimore	14.5	....	5.0	8.0
Cumberland	16.6	....	5.0	12.7
Wash'g'n, D. C.	12.5	16.5	3.0	9.0
Danville, Va.	17.5	21 0	6.0	12.9
Norfolk	16 0	19.5	6.0	11.3
Petersburg	16.5	20.0	6.0	11.7
Richmond	16.5	20.0	6.0	11.7
Raonoke	17.5	21.0	6.0	12 9
Charles'n, W. Va.	15.8	19.3	5.0	12.6
Parkersburg	15.1	18.6	5.0	11.2
Wheeling	15.0	18.5	5.0	12.2
Charlotte, N. C.	18.4	21.9	7.0	12 6
Hickory	18.9	22.4	7.0	13 0
Mt. Airy	18.7	22.2	7.0	12 8
Raleigh	18.0	....	7.0	12 1
Salisbury	18.5	....	7.0	12.7
Charleston, S.C.	17.0	20.5	7.0	11.3
Columbia	18.3	21.8	7.0	12 6
Spartanburg	18.7	22.2	7.0	12.9

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Omaha	18 4	20.4	6.0	10.4
McCook	19.1	21 1	6.0	11.1
Norfolk	18.8	20.8	6.0	10.8
North Platte	19.2	21.2	6.0	11.2
Scottsbluff	19.9	21.9	6 0	11.9

Note—Discounts to dealers: where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3¼ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective January 1, 1935.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Philadelphia, Pa.	16.5	17 5	5.0	9.5
Pittsburgh	17.5	19.5	5.0	10.0
Allentown	17.0	18.0	5.0	9.5
Erie	17.5	18.5	5.0	8.0
Scranton	16.75	17.0	5.0	10.0
Altoona	17.5	19.5	5.0	9.5
Dover, Del.	17.0	17.0	6.0	10.0
Wilmington	17.0	17.0	5.0	9.0
Springf'ld, Mass.	14.0	17.5	4.0	7.5
Worcester	14.0	17.5	4.0	7.75
Hartford, Conn.	13.5	17.0	4.0	7.0
New Haven	13.0	16.5	4.0	7.5
Providence, R. I.	12.5	16.0	3.0	7.0

Note—Tank-wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
N. Orleans, La.	18 5	22.0	‡9.0	12.0
Baton Rouge	17.0	20.5	†7.0	11.5
Alexandria	18.5	....	†*8.0	11.0
Lafayette	19 0	....	‡*8.0	12.5
Lake Charles	19.0	....	†*8.0	11.0
Shreveport	16.5	20.0	†7.0	10.0
Knoxville, Tenn.	20.5	24.0	8.0	14.0
Memphis	19.0	22.5	8.0	11.0
Chattanooga	20.5	24.0	8 0	11.5
Nashville	20.0	23.5	8.0	10.0
Bristol	18.75	21.5	8 0	14.5

*Includes city tax of 1 cent.

†Includes 1-cent parish tax. ‡Includes 3-cent parish tax.

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline: Post deal	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag
Albany, N. Y.	13.0	16.5	4.0	7.75
*Met. N. Y.:				
Manhtn., Bronx	13.2	18.2	4 0	7.25
Staten Island	13.2	18.2	4.0	7.25
Qu'ns & Br'klyn	13.2	18.2	4.0	7.25
Buffalo	13.5	17.0	4.0	8.25
Rochester	13.5	17.0	4.0	8.25
Syracuse	13.5	17.0	4.0	8.75
Boston, Mass.	12.5	16.0	4.0	7.50
Portland, Me.	14.5	18.0	5.0	7.75
Manch'ter, N. H.	15.0	18.5	5 0	8.00
Burlington, Vt.	16.5	20.0	5.0	8.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Southwestern District

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag
Dallas, Tex.	15.0	17.0	5.0	8.5
Fort Worth	15.0	17.0	5.0	8.5
Houston	16 0	18.0	5.0	8.5
San Antonio	16.0	18 0	5.0	8.5
El Paso	17.0	19.0	5.0	8.0
Muskogee, Ok.	17.0	19.0	5.0	8.0
Okla. City	17.0	19.0	5.0	8.0
Tulsa	17 0	19.0	5.0	8.0
Ft. Smith, Ark.	17.0	19.0	5.0	8.0
Little Rock	19.5	21.5	7.5	9.5
Texarkana	16.5	18.5	5.0	8.5

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150 gallon lots if covered by contract.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Ohio points	17.5	19.5	5.0	*13.5

*Includes state tax of 1 cent.

Canada*

Imperial 3-Star Gasoline
IMPERIAL OIL, LTD.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Hamilton, Ont.	21.0	23.5	6.0	17.0
Toronto, Ont.	21.0	23.5	6.0	17.0
Brandon, Man.	30.8	33.8	7.0	22 9
Winnipeg, Man.	29.2	32.2	7.0	20.7
Regina, Sask.	29.5	32.5	7.0	22.0
Saskatoon, Sask.	32.3	35.3	7.0	24.8
Edmonton, Alta.	31.7	34.7	7.0	24.2
Calgary, Alta.	29.0	32.0	7 0	21.5
Vancouver, B. C.	25 0	29.0	7.0	23.0
Montreal, Que.	19.5	22.0	6 0	17.5
St. John, N. B.	25.0	29.0	8.0	19.5
Halifax, N. S.	25.0	29.0	8.0	19.5

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price; undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal where discounts below station price are one-half cent per gallon less.

Retail Price Changes

Standard Oil Co. of New Jersey reduced tank-wagon gasoline .5 cent in Baltimore and Washington.

Socony-Vacuum Oil Co., Inc., July 1 reduced posted dealer and station gasoline 1 cent throughout New York state following a reduction of 1 cent in the state gasoline tax.

Imperial Oil, Ltd., July 2 reduced tank-wagon gasoline and kerosene 1 cent in Vancouver.

Average Retail Price

The average retail price on middle octane or regular gasoline, based on the service-station prices in 50 cities throughout the United States on July 1 was 14.30 cents per gallon. This figure, which is exclusive of all federal, state and county taxes, represents a decrease of .01 cent from the year's peak established on June 1. The July 1 composite price is .6 cent higher than that on January 1 and .3 cent higher than that of July 1, 1935. It also represents the highest price recorded at that time since July, 1930.

Prefer American Burners

American oil burners have a practical monopoly of the Greek market, a report to the commerce department from its Athens office shows. Efforts to introduce German and British oil burners into Greece, the report states, have proved unsuccessful owing to their higher price and inferior quality as compared with the American product.

It is estimated that there are approximately 750 American oil burners operating in Greece, 500 of which have been imported in the last two years. More than 90 per cent of these installations are located in the district of Athens and Piraeus, the report states.

Under the present scheme of import control, oil burners receive the same treatment as all kinds of machinery, their importation being effected on the basis of a special permit covering each individual unit.

Prospects for increased sales of American oil burners in Greece in the immediate future are definitely favorable, the report states.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of July 7, 1936

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below (3d. gr.)	.04⅞	.05
63-67 octane	.05⅝	.05½
68-70 octane (regular)	.06	.06⅛
60-62 400 grades:		
62 octane and below	.04⅞	.05
63-67 octane	.05⅝	.05⅝
68-70 octane (regular)	.06	.06⅛
64-66 375	.04⅞	.05⅛
68-70 360	.05	.05¼

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04⅞	.05
63-67 octane	.05⅝	.05½
68-70 octane (regular)	.06	.06⅛
60-62 400	.04⅞	.05
64-66 375	.05	.05⅛

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:	
62 octane and below	.05¾
63-67 octane	.06½
68-70 octane (regular)	.06¾
60-62 400	.05¾ .06

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:	
62 octane and below	.05¾
63-67 octane	.06½
68-70 octane (regular)	.06¾

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04¾	.05
63-67 octane	.05⅝	.05½
68-70 octane (regular)	.06	.06⅛
60-62 400 grades:		
62 octane and below	.04¾	.05
63-67 octane	.05⅝	.05½
68-70 octane (regular)	.06	.06⅛
64-66 375	.04⅞	.05
68-70 360	.05	.05⅛

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:	
Below 60 octane	.05⅝
60-64.9 octane	.07
65-70 octane	.07¼
64-66 375	.05¾
68-70 350	.06

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07	.07½
58-60 400	.07½	.08¼

EAST COAST (domestic)—

U. S. Motor, below 60 octane:	
*New York (Bayonne)	.06½
Baltimore	.06½
U. S. Motor, 60-64.9 octane:	
*New York (Bayonne)	.06¾
Philadelphia	.06¾
Boston	.06¾
Baltimore	.06¾
Charleston, S. C.	.06¾
U. S. Motor, 65 and above:	
*New York (Bayonne)	.07
Philadelphia	.07
Boston	.07
Baltimore	.07
Charleston, S. C.	.07

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05⅝	.05¾
60-64.9 octane		.06
65 octane and higher	.06¼	.06¼

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05½
52-54 450 (blending)	.05½
54-56 450 (blending)	.05⅝

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.02¾
Grade 18-55	.03¼	.03⅜
Low vapor pressure grade:		
*14 lb. v.p. (max.)	.03¾	.03⅞
*12 lb. v.p. (max.)		.04¼

*Nominal.

NORTH TEXAS—

Grade 26-70	.02½
Grade 18-55	.03

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.02⅝	.03

CALIFORNIA—

75-85 375-390	.07	.07¾

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.03⅞	.04
41-43 gr., 300-350 i.b.p., 110-125, flash, 500-520 e.p.	.04	.04¼
46-48 gr., 210-230 i.b.p., 480 max. e.p.	.04⅞	.05

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03½	.03⅝
42-44	.03¾	.04

NORTH TEXAS—

41-43	.03⅝	.03¾

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.04

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04⅜	.04½

PENNSYLVANIA (inland refineries)—

45	.05	.05⅛
46	.05⅛	.05¼
47	.05¼	.05⅜

CHICAGO (Based on Group 3)—

41-43	.03¾	.04
42-44	.04	.04¼

CALIFORNIA (Pac. Coast market)—

38-40 high burning test	.03¼	.05

NEW YORK (Bayonne, N. J.)—

41-43	.04⅝	.04⅞

GULF COAST (domestic)—

41-43	.03⅞

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03¼	.03⅜
No. 1 straw, 38-40	.03	.03¼
No. 2 straw, 32-36	.02⅞	.03
No. 2 dark, 32-36	.02¾	.03
No. 3, 28-32	.02⅝	.02⅞
No. 3, 15 and above, 28-32	.02⅝	.02⅝

NORTH TEXAS—

No. 1 prime white, 38-42	.03¾	.03½
No. 1 straw, 38-40	.03¼	.03½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.02⅞ .03

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36	.03½	.03⅝
No. 3, 28-32	.03⅛	.03¼

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-42	.03¼	.03½
No. 1 straw, 38-40	.03⅛	.03¼
No. 2 straw, 32-36	.02⅞	.03
No. 2 dark, 32-36	.02¾	.03
No. 3, zero to 15, 28-32	.02¾	.02⅞
No. 3, 15 and above, 28-32	.02⅝	.02½

NEW YORK (Bayonne, N. J.)—

*No. 1	.04⅞
*No. 2	.04¼
*No. 4	.03¾

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02½	.02⅝
No. 4, 24-28, low cold test	.95	1.05
No. 4, 15 and above, 24-28	.80	.85
No. 5, low cold test	.72½	.80
Below 18 fuel oil, industrial	.67½	.75

NORTH TEXAS—

U.G.I. gas oil	.02⅝	.02½
No. 4, 24-28, low cold test	.95	1.00
No. 5, low cold test	.72½	.80
Below 18 fuel oil, industrial	.65	.75

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U.G.I. gas oil	.02⅝	.02⅞
10-14 fuel oil, industrial	.70	.75

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.60	.65

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅜	.02½
No. 4, 24-28	.95	1.00
No. 4, 15 and above, 24-28	.77½	.82½
No. 5, 18-22	.72½	.75
No. 6, 10-16	.62½	.67½

PENNSYLVANIA (inland refineries)—

36-40	.04½	.04⅝

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	1.00	1.20
24 plus diesel	1.00	1.25
24 plus diesel (bunkers)	1.10	1.30
12-16 (bunkers at tidewater)	.85	.95
10-16 (cargo lots)	.80	.95
12-17 (tankcars)	.70	.95
San Joaquin Valley:		
10-18 (tankcars)	.65	.75
San Francisco:		
24 plus diesel, per bbl.	1.30	1.35
21 plus diesel (bunkers)		1.35
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03¼	.03⅜
28-30 diesel (bunkers)		1.50
Bunkers (bulk cargoes)		.90
Bunker C (bunkers)		.90

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil	.04¼
28-30 diesel (lighterage 6¼ plus per bbl.)	1.65
28-30 diesel (tankers)	.04¼
*Bunker C (to ocean-going ships in N. Y. harbor)	1.05
Industrial fuel (tankcars)	.03¾

*Lighterage charge 5c bbl. additional.

Bright and Steam-Refined

OKLAHOMA (Group 3)—

Bright Stocks:		
190-200 D, 15-25		.21½
150-160 D, 0-10		.18½
150-160 D, 15-25		.18
150-160 E, 15-25		.17½
100-110 D, 0-10		.17
Steam refined:		
631 green (treated)		.14
600 dark green (untreated)		.05½

PENNSYLVANIA—

Bright Stocks (Pennsylvania grade No. 8 color, 145-50 at 510; 540-550 flash):		
10 pour test	.24½	.25
15 pour test	.23½	.24
20 pour test	.22½	.23
25 pour test	.21½	.22
Steam refined:		
600	.13½	.14
650	.14½	.15
600 Pennsylvania flash	.15⅛	.16
630 flash	.17½	.18
600 Warren E filtered	.15½	.16

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:		
150-3		.10
180-3		.11¼
150-4		.10⅝
200-3		.11⅝
200-4		.11¼
250-3		.13⅝
250-4		.13¼
280-3		.14⅝
280-4		.14¼
300-3½		.15¼
400-3½		.16
100-2 paraffin oil		.05¾
15-20 Cold Test:		
200-3		.10¾
200-4		.10¼
240-3		.12¾
240-4		.12¼
280-3		.13⅝
280-4		.12⅝

GULF COAST—

Pale Oils:		
200-3	.06½	.07
300-3	.07	.07½
500-3½	.08	.08½
750-3½	.08½	.09
1,200-3½	.09	.09¼
2,000-4	.09¼	.09½
Red Oils:		
200-5-6	.06½	.06¾
300-5-6	.06¼	.07
500-5-6	.07½	.08
750	.08	.08½
1,200-5-6	.08½	.09

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3		.06
200-2½-3		.06½
300-3-3½		.06½
400-3-4	.08½	.09¼
450-3-4	.09¾	.10
550-3-4	.10	.10½
600-3-4	.10½	.10½
Red Oils:		
200-4-5		.06
300-5-6		.06¼
350-5-6	.07	.08
400-5-6	.08	.08¼
450-5-6	.08¼	.08½
500-5-6	.08½	.09
600-5-6½	.09	.09½
700-6½ plus	.09¾	.10
750-6½ plus	.10	.10¼
900-6½ plus	.10¼	.10½

PENNSYLVANIA—

150 vis. at 750° F., color, 400-405 flash:		
Zero pour test	.20	.20½
10 pour test	.19	.19½
15 pour test	.18½	.19
25 pour test	.17½	.18
180 vis. at 70° F., 3 color:		
25 pour test	.20	.20½
200 vis. at 70° F., 3 color:		
Zero pour test	.23½	.24
10 pour test	.22½	.23
15 pour test	.22	.22½
25 pour test	.21	.21½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02⅝

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0235	.0240
124-126 (a.m.p.) w.c. scale	.0240	.0245

NEW YORK—

Wax in bags fully refined:		
123-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0240	.0250
124-126 (a.m.p.) y.s.	.0240	.0245
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03¼
Lily white	.06⅝	.06¾
Snow white	.07¾	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.05½
60-62 400		.05⅝
61-63 390	.05⅝	.05½
64-66 375		.05½

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04½
55-56 octane	.04½	.04¾
65-67 octane	.04¾	.05
67-69 octane	.05	.05¼
Above 69 octane	.05¼	.05½
65 and above 400 e.p.	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white		.03
41-43 water white		.03⅛
44 water white		.03⅝

LOS ANGELES—

41-43 water white	.04½	.05¼

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.22	.22½
600 S.R. unfiltered	.20	.20½
650 S.R. unfiltered	.21	.21½
600 flash S.R.	.22	.22½
630 flash S.R.	.24	.24½
Bright Stocks:		
8 color	.28	.28½
6½ plus color in dilution	.27	.27½

NEUTRAL OIL

200-3 color	.27½
150-3 color	.24

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0260	.0270
124-126 y.s.	.0240	.0245

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 9, 1936)

East Texas*	$1.15
Van, Tex.†	1.02
Altus and Tipton, Okla.‡	1.08

Other fields (see gravity table).

*All companies. †Pure Oil Co. ‡Gypsy Oil Co.

West Texas

Crane, Upton, Howard, Glasscock and Mitchell Counties	$ .80
Winkler County	.85
Lea County, N. Mex.	.85
Pecos County*	.85
Pecos shallow†	.75

*Shell Petroleum Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Note—For Humble, Magnolia and Texas Co.'s West Texas and Lea County prices see gravity table. Above prices are those of other buyers.

Rocky Mountain States

(Effective January 9, 1936)

Iles, Colo., light*	$1.06
Iles, Colo., heavy*	1.00
Greybull, Wyo.*	1.28
Torchlight, Wyo.*	1.28
Grass Creek, Wyo., light*†	1.28
Grass Creek, Wyo., heavy*†	.72
Hamilton Dome, Wyo.*	.67
Elk Basin, Wyo., light*†	1.28
Frannie, Wyo., heavy*	.72
Frannie, Wyo., light (Feb. 24, 1936)*	.78
Hogback, N. Mex.*	1.21
Pondera, Mont. (Jan. 29, 1936)*.	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.11
Rock Creek, Wyo.†	1.12
Artesia, N. Mex. (Dec. 1, 1923)‡	.75
Maljamar, N. Mex. (Sept. 29, 1933)‡	.75
Fort Collins and Wellington, Colo. (Jan. 9, 1936)‡	See Note
Florence, Colo.	.98
Lance Creek, Wyo.	.85
Lost Soldier, Wyo. (Sept. 30, 1933)..	.88
Hudson, Wyo. (June 2, 1931)	.65
Sunburst, Mont. (June 5, 1936)	1.15
Cat Creek, Mont.	1.28
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Note—Fort Collins and Wellington are not posted, price 5 cents under quotation of Salt Creek crude of like gravity (Fort Collins 36°; Wellington 33°). *Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Southwest Texas

(January 9, 1936)

Saxet	$ .90
Mirando	.85
Pettus	1.35
Salt Flat*	.97
Salt Flat‡	.97
Darst Creek*	.97
Darst Creek†	.97
Luling	.90
Lytton Springs	1.00
Duval County	.85

*Humble Oil & Refining Co. †Magnolia Petroleum Co., Gulf Pipe Line Co. and Texas Co. ‡Shell Petroleum Corp. Saxet posted by Humble and Texas; Mirando by Humble and Magnolia; Pettus by Humble; Salt Flat by Humble; Luling and Lytton Springs by Magnolia; Duval by Texas Co.

Middle Western States

OHIO OIL CO.

Lima (Jan. 10, 1936)	$1.25
Illinois (Jan. 9, 1936)	1.23
Princeton, Ind. (Jan. 9, 1936)	1.23
Midland, Mich. (June 15, 1936)*	1.42
Midland, Mich. (June 15, 1936)†	1.42
West Branch, Mich. (June 15, 1936)	1.26
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River (Jan. 9, 1936)	1.30
Kentucky River (Jan. 9, 1936)	1.28
Western Kentucky (Jan. 9, 1936)	1.23

*Posted by Pure Oil Co. and includes Greendale, Porter, Beaverton and Crystal crudes. West Branch, Mich., by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co. †Simrall Corp.

Gulf Coast

(January 9, 1936)

Cleveland, Tex.	$1.10
Hardin, Tex.	1.03
Greta, Tex.	.90
Refugio, Tex., heavy	.90
Tomball, Tex.	1.30
LaFitte, La.	1.12
Livingston, Tex.	1.15
Bosco, La. (Jan. 16, 1936)	1.05
Evangeline, La.	1.07
Welsh, La.	.96

Cleveland and Hardin by Magnolia; Greta by Texas Co.; Refugio by Humble; Tomball by Humble and Magnolia; LaFitte by Texas Co.; Bosco by Pure; Evangeline and Welsh by Stanolind Oil & Gas Co.; Livingston by Shell Petroleum Corp.

North Louisiana and Arkansas

Smackover, all grades (Jan. 10, 1936)*	$.75
Smackover, all grades (Jan. 9, 1936)†	.80
Tullos and Urania (Jan. 10, 1936)	.97
Nevada, Ark. (Jan. 10, 1936)	.65
El Dorado East Field (Jan. 16, 1936).	.75
Converse, Holly, Pleasant Hill and Zwolle (Jan. 10, 1936)*	1.10
Linbon, Ark. (Jan. 10, 1936)*	1.10
Elm Grove, La. (Jan. 10, 1936)	.80

*Standard Oil Co. of Louisiana, Gulf Refining Co., Louisiana Oil Refining Co., Texas Co. (effective January 14) and Magnolia Petroleum Co. (effective January 16). Urania by H. L. Hunt Co. and Louisiana Oil Refining Co. Nevada by Standard of Louisiana, El Dorado East field by Magnolia Petroleum Co. Phillips Petroleum Co. (effective January 17), posts 75 cents for all grades in Union and Ouachita Counties, Arkansas.

Eastern States

TIDE WATER PIPE CO.
(Effective Jan. 13, 1936)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.17
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.12
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines	1.42

PENNZOIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines:	
Group A — Includes Cochran, Franklin, Hamilton and Doolittle districts.	2.42
Group B — Includes Titusville district.	2.41
Group C — Includes Turkey and Tidioute districts.	2.40
Group D — Includes Bear Creek and Porkey districts.	2.39
Group E — Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	2.36

Price depends on lengths of pipe line haul to plant at Oil City.

PURE OIL CO.
(Effective Jan. 13, 1936)

Cabin Creek, W. Va.	$2.12
Bradford Hollow, W. Va.	2.12
Kelly Creek, W. Va.	2.12

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (Feb. 3, 1936):†	
Clean naphtha	2.70
Discolored naphtha	2.46
Crude oil, 50 gravity	2.32
Crude oil, 45 to 49.9	2.12
Crude oil, 40 to 44.9	1.55

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$ .74

*F.o.b. ship, based on April transactions and exclusive of production and export taxes and bar dues.

Mexican Crude Production

May petroleum production in Mexico is estimated at 3,230,336 bbls. by the Mexican ministry of national economy. In the same month last year it was 3,529,791 bbls.

Crude Prices by Gravities

Gravity—	Oklahoma, Kansas, and Salt Creek, Wyo.	Central and North Texas	East Central Texas	North Louisiana, Arkansas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Conroe, Texas	West Texas and Lea County, New Mexico	Gulf Coast, Texas and Louisiana	Anahuac and Dickinson, Texas	Iowa and Cameron Meadows, Texas
Below 20	....	....	....	....	....	....	....	....	$ .92	....	$ .82
20-20.9	....	....	....	....	....	....	....	....	.94	....	.84
21-21.9	....	....	....	....	....	....	....	....	.96	....	.86
22-22.9	....	....	....	....	....	....	....	....	.98	....	.88
23-23.9	....	....	....	....	....	....	....	....	1.00	....	.90
24-24.9	....	....	....	....	....	....	....	....	1.02	....	.92
Below 25	$.86	....	....	$.78	....	....	....	....	....	....	....
25-25.9	.88	....	....	.80	....	....	....	....	1.04	....	.94
26-26.9	.90	....	....	.82	....	....	....	....	1.06	....	.96
27-27.9	.92	....	....	.84	....	....	....	....	1 08	....	.98
28-28.9	.94	....	....	.86	....	....	....	....	1.10	....	1.00
Below 29	.94	$.84	$.91	....	....	....	....	$75	....	....	....
29-29.9	.96	.86	.93	.88	....	....	....	.76	1 12	....	1.02
30-30.9	.98	.88	.95	.90	....	....	....	.78	1 14	$1.04	1.04
31-31.9	1.00	.90	.97	.92	....	....	....	.80	1.16	1.06	1.06
32-32.9	1.02	.92	.99	.94	....	....	....	.82	1.18	1.08	1.08
33-33.9	1.04	.94	1.01	.96	....	....	....	.84	1 20	1.10	1.10
34-34.9	1.06	.96	1.03	.98	....	....	....	.86	1 22	1.12	1.12
Below 35	....	....	....	....	$.86	$.81	....	....	....	....	....
35-35.9	1.08	.98	1.05	1.00	.88	.83	$1.24	.88	1.22	1.14	1.12
36-36.9	1.10	1.00	1.07	1.02	.90	.85	1.26	.90	1 22	1.16	1.12
37-37.9	1.12	1.02	1.09	1.04	.92	.87	1.28	.90	1.22	1 18	1.12
38-38.9	1.14	1.04	1.11	1.06	.94	.89	1.30	.90	1 22	1.20	1.12
39-39.9	1.16	1.06	1.13	1.08	.96	.91	1.32	.90	1.22	1 22	1.12
40 and over	1.18	1.08	1.15	1.10	.98	.93	1.34	.90	1.22	1 24	1.12

Magnolia Petroleum Co. in the East Central Texas field pays 7 cents per barrel less than above posted prices in that field.

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

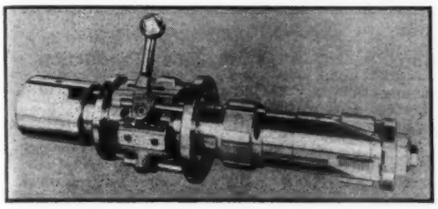
Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E.Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset	Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.70	$.65	$.70	$.70	....	....	$.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.70	.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.65	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$.70	.74	.66	.74	.71	$.70	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.82	.77	.80	....	.70	.78	.68	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.73	.82	.71	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.74	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$ 84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.92	.77	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1 06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.80	.94	.86	.79	....	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.83	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	.86	1.02	....	....	....	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	.88	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	.99	1.15	.91	1.10	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	.94	1.14	....	....	....	.99	....
30-30.9	1.21	1 19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.03	1.06	1.25	.97	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1 22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	.99	....	....	....	....	....	....
32-32.9	....	....	....	....	1 27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	1.02	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1 32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	1.04	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1 22	1.32	1.25	1.20	....	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1 42	....	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. Santa Paula and Orcutt posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over.

NEW OR IMPROVED EQUIPMENT

Concentricity Is Made Sure by Pilots on Collapsible Tap

The Landis Machine Co., Waynesboro, Pa., has put on the market a collapsible tap of interesting design involving the use of pilots to insure concentricity of the thread being tapped with other parts of the casting. The illustration shows such pilots applied to a Landis style LT collapsible tap. The body of the tap is of special length to reach the bottom of a deep hole in a



steel casting tractor part. The pilot ahead of the chasers lines up the tap with bore of the hole which is to be tapped. The rear pilot is made in the form of a collar fitting over the tap body. It fits a reamed hole near the top of the casting with which it is necessary to maintain concentricity. Both pilots are made of steel, are hardened and ground, and are made to revolve with the work in order to prevent sizing in the work.

Similar pilot arrangements suitable for the requirements of practically any type of job can be furnished with the Landis style LT collapsible taps in all sizes from 1⅜ inches to 12 inches, inclusive.

Bulletins, Booklets and Other Literature for the Trade

"Corrosion's Costly Run Checked" is the title of one of the articles in the current issue of Toncan Topics, published by the Republic Steel Corp., Cleveland, Ohio.

The Hydraulic Press Manufacturing Co., Mount Gilead, Ohio, has for distribution a 30-page booklet on Forgsteel valves and fittings. A complete line of these appliances for high-pressure hydraulic service is presented.

"Lower-Cost Manufacturing by Shielded-Arc Welding" is the title of a 16-page illustrated booklet ready for distribution by the Lincoln Electric Co., Cleveland, Ohio.

A mailing-piece sent on request by the Brown Instrument Co., Wayne and Roberts Avenue, Philadelphia, Pa., is devoted to Brown air-operated controllers for temperatures, pressures, flows and liquid levels.

The twin G-fin section fuel-oil heater, which provides flexible capacity for varying fuel requirements, is described in a bulletin sent on request by the Griscom-Russell Co., 285 Madison Avenue, New York.

Advantages of Gates Vulco rope drives are emphasized in the July number of Industrial News, published by the Gates Rubber Co., Denver, Colo.

A unique mailing-piece of 10 pages devised by the Chicago Pneumatic Tool Co., 6 East Forty-fourth Street, New York, is an actual-size reproduction of the company's Midget Universal electric drill.

Fluor air-cooled mufflers, with illustrations of installations in the oil and gas industry, are the subject of an 8-page bulletin obtainable from the Fluor Corp., Ltd., 909 East Fifty-ninth Street, Los Angeles, Calif. The bulletin is of particular interest to engineers.

Announcement is made by the Link-Belt Co., Indianapolis, Ind., of a 24-page book, No. 1557, in which are tabulated the many cut-tooth sprocket wheels now available with Silverlink finished-steel roller chains.

The Ryerson General Data Book, prepared by Joseph T. Ryerson & Sons, Inc., contains 192 pages filled with facts concerning tool and alloy steels, along with engineering and mechanical information which makes it a valuable shop manual.

"Thredkote" Lubricates, Seals Joints and Prevents Rust

Humble Thredkote, a modern thread compound offered by the Humble Oil & Refining Co., is manufactured in two grades. No. 1 is a gray paste for use on high-pressure lines. No. 2 is a black paste for use on low-pressure lines and steam lines. This product is prepared on a special petroleum base which has distinctive lubricating properties. Rust-inhibitors are then thoroughly incorporated in the lubricant to form the basis for both grades. The difference in the color and characteristics of the two grades of Thredkote is caused by the use of a different filler for each grade. No. 1 gets its gray color from the fine zinc powder blended into the base. No. 2 is black because graphite is used as its filler.

Thredkote, according to the manufacturer, offers a three-point service. First, by lubricating the threads; second, by sealing the joints; third, by preventing the formation of rust in the connections. When Thredkote is daubed on the threads which are to be made up the special petroleum base penetrates into the surface of the metal and fills all pores and minute cavities. The lubricating quality allows connections to be started easily and drawn up tight with the minimum of effort, and as the connection is being drawn up the petroleum base is forced out partially, leaving a thin deposit of the filler on the threads. This film seals the joint and prevents metal-to-metal contact on the threads, thereby preventing "freezing" of the connection. The rust-inhibitors in the paste prevent the formation of rust on the threads.

New Type Swage-Nipple and Bullplug Made by Larkin

The Larkin Packer Co., Tulsa, has put on the market a new and improved swage-nipple and bullplug in the smaller sizes, on which patents have

been applied for. These bullplugs and swage-nipples, which are made in sizes 1 inch and under, are hexagonal shape instead of round. The hexagonal design makes it unnecessary to use a pipe wrench. It is possible to use a Westcott wrench or any type of open-end wrench on these small-size nipples and plugs.

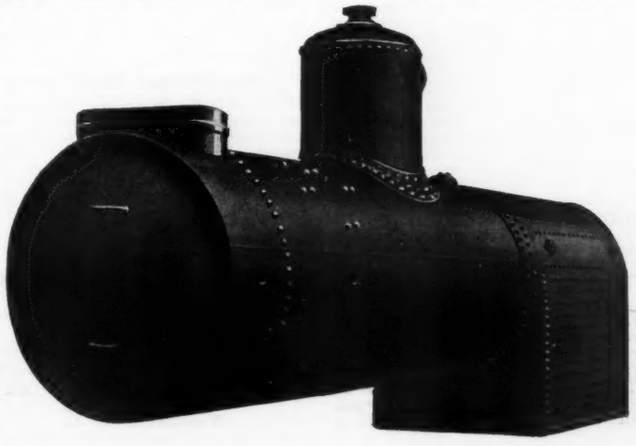
Armstrong's Wool Insulation

Consummation of a selling arrangement whereby the Armstrong Cork Products Co. will act as sales agent in the equipment insulation field for Corning Glass Works' new highly refined wool insulation, consisting of long, interlocked glass fibers, is announced by L. E. Cover, manager of Armstrong's equipment insulation sales department. Armstrong will sell this material under the trade name of "Armstrong's Wool Insulation." The product offered to the refinery trade will be made up in the form of metal mesh blankets. The insulation will be recommended for temperatures from 250° to 900° F. and will be particularly applicable to pressure stills, refractionating columns and other types of stills.

FUSION-WELDED BARRELS HAVE MANY ADVANTAGES

Fusion welded barrels are a feature of Farrar & Trefts boilers. The welding on these barrels complies with the A.S.M.E. boiler construction code and is classified as "class 1 fusion welding." All welds are radiographed to show through penetration and fusion. The entire barrel is stress-relieved by heating it uniformly to an even temperature, then hammer-tested and hydrostatically tested at twice the working pressure.

The advantages of fusion-welded barrel construction, according to the manufacturers, are uniform barrel diameter with equal stress at all points, decreased weight, making for ease in handling; neater and smoother interiors, facilitating quicker cleaning. Fusion-welded barrel boilers are furnished on special orders only.



West Texas Completions

Crane County

Gulf Oil Corp. No. 5 Henderson, 3,269-3,526 feet, 14,748 bls. per day through casing. Hogan and others No. 1 Hughes, 1,995-2,060 feet, 441 bbls. per day on pump.

Ward County

Elliott and Hardesty No. 1-B Lee, junked and abandoned 2,610 feet. Great States Oil Co. No. 1 Lee and others, 2,256-2,435 feet, plugged back to 2,378 feet, shot, 121 bbls. Peck and others No. 2 Reynolds, dry and abandoned 2,357 feet, elevation 2,455 feet. Texas Pacific Coal & Oil Co. No. 6 Barker, 2,243-2,420 feet, shot, 33 bbls.

Howard County

Goldman No. 1 Denman, 2,470-2,823 feet, 940 bbls. per day through casing.

Upton County

Burk and Thomas No. 4 Robbins, 2,159-2,210 feet, acidized, 509 bbls. on pump. Cardinal Oil Co. No. 2 Shirk, 2,133-2,200 feet, acidized, 489 bbls. on pump. Farley No. 3-B Lane, total depth 2,292 feet, plugged back to 2,285 feet, 238 bbls. on pump, acidized. International Petroleum Corp. No. 4-A McClintic, 2,865-3,024 feet, shot, 718 bbls. Pure Oil Co. No. 5 Hughes, 2,230-2,323 feet, acidized, 194 bbls. oil and 216 bbls. water on pump. Texas Pacific Coal & Oil Co. No. 6 Shirk, 2,120-80 feet, acidized, 817 bbls. on pump.

Winkler County

Atlantic Oil Producing Co. No. 7-J Hendricks, 2,800-3,030 feet, 1,012 bbls. Fox and Butler No. 4 Brown-Altman, 3,132-3,180 feet, shot, 35 bbls. through one-half inch tubing choke. Humble Oil & Refining Co. No. 9 Howe, 2,827-2,992 feet, shot, 1,040 bbls. through casing; No. 6-B Walton, 2,814-3,150 feet, shot, 150 bbls. through casing. Sinclair Prairie Oil Co. No. 1-A Adriance, total depth 3,124 feet, shot, 55 bbls. Texas Pacific Coal & Oil Co. No. 11 Daugherty, 2,800-2,970 feet, shot, 841 bbls. Tide Water Oil Co. No. 5 Walton, 2,861-2,915 feet, shot, 1,237 bbls. through casing.

CLASSIFIED ADVERTISING

Royalties—Production

Northwest Ector County, Texas, presents real opportunity to oil operators. New area just being opened. Prices now low but certain to advance due to three good wells just brought in flowing 400 to 700 bbls. 36 gravity oil from pay found around 4200 ft. Close In Drilling Blocks For Sale. Wire.
H. B. OPP, Burnet, Texas.

I BUY AND SELL oil royalties and producing wells, East Texas field. B. A. SKIPPER. Longview, Texas.

Brokers—Salesmen

Sell in the most active area in the United States — The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Securities and Exchange Commission. Inquiries invited.

B. D. BUCKLEY

Paul Brown Bldg., St. Louis, Mo.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

PRODUCING OIL ROYALTIES
(ALL FIELDS)
Bought, Sold and Quoted.
HENRY L. BAKER CO.
715 Van Nuys Bldg.,
Los Angeles, Calif.
Telephone Trinity 7391

JOIN ME in the oil business in Texas! Many opportunities. Have bargains in Royalty, production, oil payments, in Texas-Louisiana, 2-3-4 year payouts. Tom Skaggs, Box 53, Midland, Texas.

Producing and Non-Producing Royalties. Bosco, Van, Rodessa, West Texas.
Wholesale — Retail.
W. E. HOUSEL
76 Beaver Street, New York City.

Producing-ROYALTIES-Non-Producing
Dealers Exclusively
Schedules and Engineers reports furnished
G. D. TERRIEN
412-13 Central Bank Bldg., Tulsa, Okla.

PRIME POTENTIAL ROYALTIES under and/or offsetting drilling wells. Wholesale exlusively. L. E. MORENCY, Hunt Building, Tulsa, Oklahoma.

Incorporations

DELAWARE CHARTERS: Complete incorporating and organizing service $35. Submitted forms. Chas. G. Guyer, Inc., Wilmington, Delaware.

CHARTERS — Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

Royalties—Production

Van—East Texas—Louisiana Royalties Bought—Sold.
WILLIAM MONROE LAYTON
40 Wall St., Suite 1437, New York City.

F. A. SANSOME
Maintains a Complete Trading Organization for Brokers, Banks and Dealers
In
Oil Royalties.
522 Fifth Avenue, New York, N. Y.

PRODUCING OIL ROYALTIES
15 years of experience.
L. H. WITWER
214 Kennedy Bldg., Tulsa, Okla.

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

PRODUCING OIL ROYALTIES
for dealers.
H. P. BOWEN
842 Kennedy Bldg., Tulsa, Okla.

OKLAHOMA CITY AND FITTS
Royalties Quoted Dealers
W. E. COOK
Perrine Bldg., Oklahoma City, Okla.

LIQUIDATION Sale, Proved Oil and Gas field, light oil production 1,000 feet; right in geological trend for big Sundance sand wells found in Medicine Bow, Rock River, Lost Soldier. National rig and gas well for drilling. Price $17,500. Part cash. No royalty deal. Act quick if interested. Address Box 11, Riverton, Wyoming.

VAN POOL — EAST TEXAS
Bought — Sold — Wholesale.
W. R. Brown & Co., Inc.
14 Prospect Pl., East Orange, N. J.

GULF-GOLDSMITH ROYALTY under 31 Sections Ector County, Texas. Will sell at highest bid, above cost $3500. 1/640th interest (one royalty acre under each Section). Royalty checks paid by trustee. Address Box H-350, The Oil and Gas Journal, Tulsa, Okla.

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood. P. O. Box 2261, Tulsa, Oklahoma.

Producing royalty Section 16-25, block B-3, Winkler County, Texas, private owner. J. P. Stouppas, 38 So. Watt Street, Youngstown, Ohio.

Ranches and Farm Lands

FOR SALE—By owner. Dallas suburban acreage, 175 beautiful acres, 160 in cultivation, 15 meadow. Living spring and branch. Preston road district. Close to S.M.U. and Highland Park. A fine country estate and ready for sub-division. Paved roads and streets. Will double in value in 3 years. Call on or address J. M. Slattery, Baker Hotel, Dallas, Tex.

Patent Attorneys

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form:
"Evidence of Conception."
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

Leases—Production

½ int. 1,000 a. oil and gas leases S.W. Ind. and first well $2,500. Perfect geol. approved loc. near prod. F. M. Pierson, Box 748, Terre Haute, Indiana.

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, New Mexico.

NEW MEXICO OIL LEASES — Are you interested in connecting with the greatest single development in the state?
A test well now drilled into the Pennsylvania formations at 5100 feet.
A well with possibilities of opening as a great gusher.
A structure fully geologized by leading geologists.
A proposition owned by leading and responsible men of Colorado and N. M.
A test well under experienced operation.
A drill approved by major company geology departments.
A well that has drilled true to preliminary geology to its present depth.
A test that has opened 15 good showings of oil and gas, with coal stratas and a good flow of gas just above its present bottom.
A structure that will return a fortune to lease holders, if a hit is made.
A wildcat well but a wildcat drilling in an oil country on deep test for the big production and the big money.
This is one of the year's best opportunities in big oil development. The prices of leases are low.
IT'S THE VEGAS DOME near Las Vegas, N. M.
If you want to enter this deal, I will give you the inside on structural leases. It's a real deal for any man to buy or handle. Write or wire, S. W. Pressey, Pueblo, Colo.

SAN AUGUSTINE
Near East Texas Field
Major Company play breaking in San Augustine. The county never having had a deep test. Now rigging up for 4000 foot Woodbine sand test. 40's-80's-120's favorably located at $10 per acre, straight commercial lease. Structure and location by Chief Geologist for major company. Immediate investigation necessary.
JOHN E. CLARK
414 Esperson Bldg., Houston, Tex.

FOR SALE oil and gas leases, drilling contracts and settled production in shallow territory. W. P. HARLEY, Bowling Green, Kentucky.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Mailing Lists

OF ROYALTY investors by deed, guaranteed. Also list Brokers by States. Oil Industry Mailing List Co., Tulsa Loan Building, Tulsa, Oklahoma.

Leases—Production

NUECES COUNTY, Tex. Oil and Gas Records. Daily report $5 per month. The Daily Review, Corpus Christi, Tex.

SHELBY COUNTY at last has a producing well. Several tests now going down. This County has been worked out and approved by best geologists. Have 1,000 acres on structure for drilling contract. Small bonus. C. A. Parker, Box 451, Center, Texas.

DEALERS ONLY
Sell High Class Oil Leases near drilling well; no S. E. C. regulations on leases—no headaches on alowable cuts—more profits for you and your clients; we give you daily drilling reports and complete support, also take some trade when necessary. Maps are ready. Wire for them.
G. E. FISHER & CO.
518 Key Building,
Oklahoma City, Okla.

LANDS, Leases, Royalties, anywhere, bought, sold. Lands, $2 acre, up. Leases 25c acre, up. Advise needs. American Investment Co., Houston, Texas.

DAILY oil reports from Tillman County in the Frederick Leader; special rate 7 months $2.50. The Frederick Leader, Frederick, Oklahoma.

¼ int. 200 a. proven Kentucky lease & well to be drilled 750' Jet sand. Sweet oil 40 grav. Geology very best. $1,500. F. M. Pierson, P. O. Drawer 748, Terre Haute, Ind.

I HAVE two Five Thousand acre blocks on one of the best known structures in North Texas. Want some individual or Oil Company to join me in financing two wells down to base of Trinity formation, which is around thirty-five hundred feet. Address J. V. Scrivner, 116 West Kaufman Street, Paris, Texas, or phone 848.

I OWN 700 acre oil and gas lease adjoining big block of Humble Oil and Refining Co. in Atascosa County, Texas. Will sell all or part. L. G. Stovall, 1040 Fulton Ave., San Antonio, Texas.

26000 ACRE lease — N.W. Alabama. Ten cents acre. Good Geology. Write for list Arkansas leases, royalties and drilling blocks. W. A. Feild, 321 W. 16th St., Little Rock, Arkansas.

FOR SALE—40,000 acres oil leases in Kit Carson, Cheyenne, Kiowa and Yuma Counties, Colo., 10 yr. leases 25c per acre rental, rentals paid for 1 yr. I furnish leases anywhere in Colo. or Kans. A. P. Tone Wilson, Burlington, Colorado.

WILL SELL all or part of 20,000 acres of oil and gas leases in south Texas. Large or small tracts. Advise your needs. H. H. White, Box 674, San Antonio, Texas.

TALCO OIL PROPERTIES: Will buy or sell proven and semi-proven leases and royalties in Talco oil field, the hottest spot in Texas. Frank Robertson, Marvin Wells, and Frank Hill, Mt. Pleasant, Texas.

PRESSURE VESSELS, GASOLINE POWERS

2—Hammerweld pressure vessels 10′ diameter x 47′ x 53′ overall length, 1″ Walls, 1⅛″ head, bottle neck, 18″ flanged opening, tested 300 lbs. Have never been in hot oil service and are in excellent condition.

2—Gasoline Powers, 5′ in diameter by approximately 65′ high x ⅝″ steel, riveted and welded with inch rivets, welded, specially built for tracking purposes. Complete with cleanout manhole, ladders and walkways.

BROWN-STRAUSS CORPORATION

Main Office—1446 Guinotte Ave., Kansas City, Mo.

Branches

Sapulpa, Okla. Arkansas City, Kans. Pyote, Texas

Steel Storage Tanks

We will erect latest type 55,000 bbl. all steel storage tanks at a great saving.

Over 500 tanks on hands from 500 bbls. to 80,000 bbls. Ready for delivery. 50—55,000 Bbl. tanks now being cut down, Haynesville, La. These tanks all built new 1924 and are extra heavy, weighing 20 tons more than standard tank.

Wire—Phone—Write—W. C. Berry

SONKEN-GALAMBA CORPORATION

64 North Second St. Kansas City, Kansas

GASOLINE PLANT EQUIPMENT

2—225 H. P. Miller Engines, Direct Connected Compressor, 17″ x 24″.

1— 50 H. P. Miller Engine.

Absorbers, Tanks, Oil Meters, All Size Fittings, Regulators, Gauges, Pumps, and Complete Equipment for 5,000,000 Cu. Ft. Capacity Absorption Plant.

Wire — Phone — Write

ROYAL OIL & GAS CORPORATION

527 McBirney Bldg., Phone 3-2909, Tulsa, Okla.

REFINERY EQUIPMENT

2—10′ x 18′ x 2⅜″ steel, Vogt Reaction chambers, $750 each on car, Ardmore, Okla.

Gasoline, Run Down and Pressure Tanks.

Pumps, all kinds and sizes, condenser boxes, agitators, pipe stills, everything needed for refinery requirements. Complete line of valves and fittings, Oakite treated and tested.

W. C. Berry Wire—Phone—Write H. J. Galamba

SONKEN-GALAMBA CORPORATION

64 North Second St. Kansas City, Kansas

WRECKING

White Star Refinery Co.

Wood River, Ill.

Complete refinery, including Dubbs Plant.

Call for inspection or write us

BARKER-GOLDMAN-LUBIN CO.

Phone Main 8181 Springfield, Ill.

Wreckers of Industrial Plants.

STEEL SHEETS

$\frac{3}{16}$″ to ½″ thicknesses in 5′ x 10′ or 5′ x 15′ sizes, guaranteed like new, any quantity for immediate shipment, 60,000 tons on hand.

THE TANK CORPORATION

64 North Second St., Kansas City, Kan. Mayo Hotel, Room J, Tulsa, Oklahoma P. O. Box 868, Cincinnati, Ohio

FOR SALE—4½″ x 10″ Enclosed pattern Gaso Portable Pumping unit, direct connected to Buda Motor. General Machine & Supply Co., Wichita Falls, Texas.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor, Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.

Terms to suit.

CINCINNATI MACHINERY & SUPPLY CO.

26 West 2nd St. Cincinnati, Ohio

125,000 feet 8′

29 lb. Standard 8 thread line pipe

A-1 Shape ready for shipment

F.O.B. Cars, Robinson, Illinois.

Inquiries Solicited.

Robinson Pipe Line Contracting Co., Inc.

Robinson, Illinois.

NEW STEEL DERRICK, 84-foot, Lee C. Moore, Type K-80. Used only once. A-1 condition. On location, Lake County, Michigan. Price $2500 spot cash. Midwest Co., 423 Cuyahoga Bldg., Cleveland, Ohio.

SEVERAL USED ROTARY RIGS

Spudders and Drilling Machines.

Several Steel Derricks & Rotary Equip.

J. S. Daniel, Beacon Bldg., Tulsa.

PULL ROD BLOCKS

$40 per thousand

J. A. Birdsong

620 North Steuben, Chanute, Kansas.

FOR SALE

1—Union Tool 5-C-3 Unitized Draw Works in good condition, having drilled only two wells, totaling 10,000 feet. Has Babbitted Bearings, air cooled brake flanges with 12″ brake band, 5½″ drum and line shafts, 5¾″ Jack shaft, rotary chain guard, and plain catchead. A bargain. For price and further particulars, address K. C. Danforth, Box 115, Kilgore, Texas.

Petroleum Eng. Laboratories

GEOLOGIC STANDARDS COMPANY

1600 East 5th Place, Tulsa, Oklahoma.

Porosity-Permeability-Saturation Tests.

Equipment Wanted

WANT to purchase used Tulsa Type High Pressure Absorbers and Evaporators. Wire collect—Rodessa Gasoline Co., Shreveport, Louisiana.

Financing

JAMES E. MILLER, 604 W. Seventh St., Tulsa, Okla., will aid in financial marketing problems. Fee basis.

PROSPECTUSES prepared and deals shaped up for registration or exemption under Federal Security Act. Fee basis. John Morris, Box 5411, Philadelphia, Pa.

Business Opportunities

GEOLOGIST desires connection on percentage basis plus expenses. Highest credentials. Address Box G-823, The Oil and Gas Journal, 415 Lexington Avenue, New York City.

MAIL, OFFICE, TELEPHONE service for manufacturers to the oil industry. In business 8 years. Business Service Exchange, Tulsa Loan Building, Tulsa.

SALES ENGINEER wants a petroleum solvent to sell to dry cleaners and laundries; must be outstanding in either price or quality or both; thoroughly responsible with a sales record in the dry cleaning industry that guarantees results. A. L. Trainor, 704 Dittman, Kansas City, Missouri.

Situations Wanted

EXPERIENCED sales engineer with proven record, desires connection with company wanting representation in Mid-Continent area. Address Box H-343, The Oil and Gas Journal, Tulsa, Oklahoma.

OIL FIELD
SPECIALTY SALESMAN
wants specialty for all or part of Texas.
Address P. O. Box 421,
Houston, Texas.

Help Wanted

Old established concern, manufacturing specialty line of non-corrosive materials for oil industry desires representation in New Mexico, Wyoming and Montana. Liberal discount to reliable firm.

Company is now doing business with largest oil concerns on Pacific and Gulf Coast.

Non-Corrosive Products Co., Ltd.
2016 Laura Ave., Huntington Park, Cal.

For Sale—Maps

Oilfield and County Ownership Maps. New price list on request. Send $1.00 for map of Texas and eastern New Mexico.

ZINGERY OIL MAP CO.
Fair Bldg. Fort Worth, Texas

BARGAIN OFFER

4—Parkersburg chain driven sand reels.

12—O. C. S. chain driven sand reels.

42—Steel bull wheel posts.

R. L. MELTON

Phone 655 P. O. Box 1355

Seminole, Okla.

Armstrong 50-B all-steel tractor drilling machine mounted on steel wheels; Ford AA engine, 40 ft. derrick; little used. Also guy lines, tools, pipe. May rent to responsible party. John Oswell, Aztec, San Juan County, New Mexico.

FOR SALE

3—80 H.P. Clark engines direct connected to 17 x 20 compressor cylinders.
1—80 H.P. Bessemer Belted engine with 56″ clutch.
2—No. 25 South Western Engineering Co. gasoline distillation units.
2—50 H.P. Code boilers 125 lbs. working pressure.

PREISLER & COCHRANE

Tel. 4-5427 Philcade Bldg.
3-9501 Tulsa, Okla.

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes

1 Inch	*1 time*	*$5.00*
1 Inch	*13 times*	*4.50 per inch*
1 Inch	*26 times*	*4.00 per inch*
1 Inch	*52 times*	*3.50 per inch*

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY

CLASSIFIED RATES

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.25*	*$3.30*	*7 Lines*	*$2.45*	*$4.20*	*$5.95*	*$7.70*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*	*9 Lines*	*3.15*	*5.40*	*7.65*	*9.90*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL

Tulsa, Oklahoma

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September

?—Tulsa or Oklahoma City, American Petroleum Institute, Division of Production, Mid-Continent district.

9-10—Louisville, Ky., Kentucky Petroleum Marketers Assn., Brown Hotel.

7-12—Pittsburgh, Pa., American Chemical Society, semiannual meeting.

7-12—Washington, D. C., World Power (Fuel) Conference.

16-18—Atlantic City, N. J., National Petroleum Association, thirty-fourth annual meeting, Hotel Traymore.

Week of 28—Indianapolis, Ind., National Tax Conference.

October

5-9—Atlantic City, N. J., National Safety Congress.

21-22—Indianapolis, Ind., Indiana Independent Petroleum Association, fall convention, Hotel Severin.

27-29—Chicago, Ill., National Oil Marketers Assn., annual convention, Stevens Hotel.

25-30—Atlantic City, N. J., first annual convention association of Gas Appliance and Equipment Manufacturers, annual convention American Gas Association, Atlantic City Auditorium.

?—Cleveland, Ohio, American Institute of Mining and Metallurgical Engineers.

November

9-12—Chicago, American Petroleum Institute seventeenth annual meeting.